Comrade Stalin is just one of the deputies of the USSR Supreme Council. Formally and legally, Comrade Stalin had the same powers as a shepherd from a mountain village, "recorded" in the Armed Forces according to the order. Yes, Stalin was still the secretary of the Central Committee of some party (that is how he signed on the documents - “Secretary of the Central Committee”, not even General), but this party, according to the Stalin Constitution in force in the country, did not have any power (the famous paragraph about “leading and guiding role" appeared forty years later, under Brezhnev). So, Chkalov's strength was not in the fact that he was a Hero of the Soviet Union, holder of the orders of Lenin and the Red Star, had the military rank of brigade commander (an analogue of the modern major general), and after the legendary flight over the North Pole to America, he became known and loved by everyone the world. All this was not worth a penny. In 1938, brigade commanders, army commanders, and even marshals were easily placed against the wall.

Chkalov was Stalin's favorite. Stalin met him in 1935, at the airport, where the country's top leadership was shown the latest aircraft. Chkalov unleashed such an enchanting cascade of aerobatics on the I-16 that Stalin wished to see this miracle pilot. They met, and Comrade Stalin liked the desperately brave, reckless, truly Russian hero. A few months later, "for testing new aviation equipment" (meaning Polikarpov's "I-15" and "I-16") Chkalov received his first Order of Lenin, and Polikarpov and his design bureau received such a "roof" in the person of Chkalov (forgive me generously for using this foul term next to Chkalov's name) that all envious people could only grind their teeth into the pillow.

The son of Valery Pavlovich, Colonel I.V. Chkalov, recalls that Stalin often called them at home and talked with his father for a long time, repeatedly invited them to the Kremlin. According to family legend, after one of these meetings, Chkalov, leaving the Boss's office, slammed the door with such force that the poor secretary's pencils fell apart on the table. However, this is all just a legend, not recorded by anyone. The exact same legend, which is neither confirmed nor refuted yet, is the story that Stalin offered Chkalov to head the NKVD. There is nothing to confirm this yet, but already now we can say that there is nothing incredible in

there would be no such solution. Stalin loved unexpected moves. In real history, he appointed A. Zavenyagin (director of the Norilsk Nickel Combine) as Deputy People's Commissar of the NKVD Beria. Replacing the bloody dwarf Yezhov with a popularly beloved hero-pilot could be a very effective and effective (in the sense of calming the frightened population beyond measure) step. And even if all this is nothing more than a legend, then one can hardly doubt the story of I. Chkalov that during the funeral of Chkalov, Stalin embraced him, the eleven-year-old son of the deceased

pilot, and naturally burst into tears ...

December 15, 1938 V.P. Chkalov died during the first test flight on the I-180.

On 12/15/1938, after a thorough inspection and testing of the engine on the ground for 25 minutes, the aircraft was provided to Comrade Chkalov for departure. Tov. Chkalov tested the engine, rudders, flaps and taxied to the start. The plane took off from the ground after a takeoff run, approximately 200–250 meters, and, gaining a height of 100–120 meters, went to the first circle with a turn. Further, the flight continued at an altitude of 500-600 meters. Having completed the first circle over the airfield, the plane went to the second circle, stretching the last one towards plant No. 22, after which it went to land. Before reaching the airfield 1-1.5 kilometers, from a height of about 100 meters, the plane made a turn to the left and disappeared behind the buildings.

The plane was found on the territory of a wooden warehouse (Magistralnaya st., house number 13) near Khoroshevsky highway. The plane, while descending, caught and cut wires in the warehouse and, turning around, crashed into a pile of wooden waste. Upon impact, Comrade Chkalov was thrown 10-15 meters along with the tail section of the fuselage, control and seat. The front of the plane was smashed. There was no fire. Comrade Chkalov was immediately taken alive by the warehouse workers and taken to the Botkin hospital, where he died a few minutes later.

These are lines from a report compiled a few hours after the tragedy. To this day, there is no clear answer to the question of the causes and perpetrators of the disaster, although a lot of paper has been written, several books have been published, and an allegedly “documentary” film has been shown on central TV. That is, the immediate cause that led to the forced landing (namely, this is how - and this is very important - the circumstances of the death of the aircraft and the pilot are characterized in the reports of the two commissions) is known and does not cause the slightest doubt. In flight, the engine stalled. That's all there was. The aircraft did not burn and did not collapse in the air, until the last seconds of the flight, the aircraft retained stability and controllability. Landing an aircraft with an idle engine is quite accessible to an average pilot. Chkalov, on the other hand, was not a "pilot of average qualification", for 8 years of work as a test pilot he took part in the tests of 70 aircraft and got out alive from much more difficult emergencies. On December 15, 1938, the tragedy occurred only because Chkalov made an emergency landing not at the airfield, and not even in an open field, but on the territory of warehouses adjacent to the airfield of the Central Airfield of

Moscow. The reasons why the forced landing had to be carried out among houses and barns are also known. Firstly, the very testing of a completely new aircraft with a new engine at the Central Aerodrome, i.e. practically inside the city limits (now it is the Airport metro area), was fraught with serious consequences. Secondly, no matter how sad it is to admit, the pilot grossly violated the flight task, which involved only ***“take-off without retracting the landing gear with speed limits in the airfield zone*** (highlighted by the author), ***height 600 m, duration 10–15 minutes.”*** Riddles begin already when trying to figure out the simplest

and at the same time the most important question: who exactly authorized the flight on an actually “unfinished” aircraft? The bottom line is that the necessary propeller did not yet exist, and a non-standard propeller was temporarily installed on the plane to perform runs on the ground. With an off-design screw, the engine overheated.

Then the blinds were removed from the hood, regulating the engine airflow with the oncoming flow (perhaps in order to somehow reduce

overheating when jogging around the airfield, although there is a lot of obscurity in the history of these ill-fated blinds ...). On the other hand, without the jalousie provided by the design of the aircraft, the engine would inevitably overcool in flight at high altitude and speed. In short, it was impossible to fly on this plane. About which none other than the People's Commissar of the NKVD Beria urgently notified the People's Commissar of Defense Voroshilov: ***“By order of the director of plant No. 156 Usachov, a new I-180 fighter, designed by engineer Polikarpov, was taken to the Central Airfield. There is not a single passport on the car, since the head of the technical control of plant No. 156, t. Yakovlev, does not sign them until all the defects found by the technical control department are eliminated. However, under pressure from director Usachev, Yakovlev signed a passport on the wings of the plane, where he noted that he allowed flight at a limited speed ... Today, 12.12 this year, at 12 o'clock in the afternoon, in the presence of flying weather, the I-180 fighter plane should go to first test flight. The car will be driven by the Hero of the Soviet Union brigade commander V.P. Chkalov. According to the source, the existing defects could threaten a catastrophe in the air ... "*** Voroshilov immediately agreed with the "opinion of the source" and forbade the flight on December 12 by his

order. Who authorized the departure on December 15? The reports of two commissions (one created immediately after the catastrophe, the second already in 1955) do not answer this obvious question. ***"... The commission, having interviewed 25 people, including Polikarpov, his deputy, the head of the quality control department, leading engineers and others, could not establish the persons personally responsible for resolving the issue of the final readiness of the aircraft and crew for flight."*** Strange. This issue is resolved not by a "survey", but by studying the signatures on the flight sheet. Further, however, the authors of the report state: ***“The main culprits for the crash of the I-180 aircraft are: the technical director, who is also the chief designer of the plant, Polikarpov, who launched an unfinished car into flight, deputy. chief designer Tomashevich*** (leading designer of the I-180), ***who authorized the possibility of flying on a defective aircraft.***

At the same time, again, no mention of the content of the flight

there is no sheet.

V.P. Ivanov, the author of several monographs on the aircraft of the Polikarpov Design Bureau, referring to primary documents, states: ***“Polikarpov and Tomashevich did not approve the flight sheet. The military representative of plant No. 156 did not endorse it either. No one signed the column “Signature of the responsible person releasing the aircraft” ... The task was signed by the leading test engineer N. Lazarev ... ”Immediately after the crash, Lazarev, who became*** ill, was taken to the hospital. The next day, linemen found the mutilated corpse of Lazarev on one of the railway lines near Moscow. In total, 16 people were arrested and convicted in the case of the death of Chkalov, including Tomashevich, Usachov, the head of the head office of the People's Commissariat of the Defense Industry (factory No. 156 was subordinate to this department) Belyaykin. The latter was released ahead of schedule in 1942 and a few days later was found murdered in his

Moscow apartment... A detailed discussion of all versions of the tragedy that occurred on December 15, 1938 is beyond the scope of this book. Let us cite just one more document - a fragment of a letter that, already in our liberal times, the mechanic of aircraft plant No. 156, A. M. Zakharenko, wrote to Chkalov's son.

> ... On December 14, at the end of the working day, I.F. approached me. Kozlov, head of the flight unit, and said: “Forecasters promise flying weather tomorrow. The first flight of the Polikarpov aircraft is planned. The tests were entrusted to Chkalov, he **was called back from vacation *(highlighted by the author).*** He needs to make a training flight on the Northrop ... ”I want to add the following, which I consider important. At that time, there was a law: pilots, especially test pilots, who had a break in flight work for more than one month, after a vacation or for another reason, were required to make a training flight on a serial machine and only after that fly on assignment. For this purpose, the Northrop was used. Such a flight was planned for Valery Pavlovich, but he did not have to make it. I don't know the reason for this...

> ... I went to Polikarpov's car. The motor was "driven" on it. Valery Pavlovich was standing at the console of the left wing when I approached him. At this time, the testing of the motor was completed. For some reason Chkalov hurried into the cockpit. I just managed to say on the run that I should have flown on the Northrop. But without listening to me, he began to climb into the cockpit and, waving his hand sharply in the direction where all the authorities were standing, said: “Come on them ... Everyone is in a hurry ...” - a conversation. And the conversation was not pleasant, because I had never seen him so irritated... ...As I later learned from the employees of our department, Sychev and Barsky, Valery Pavlovich asked them how long it would take to install the blinds.
>
> The answer was vague: two or three hours, maybe more. Valery Pavlovich realized that in this case the flight might not take place ***(in December it gets dark in Russia after 4 pm, in fact, the fatal flight began at 12:58 pm*** - M.S.), and decided not to let the designer and workers down and fly without blinds. By the way, the same M. Sychev and V. Barsky later said that they themselves discovered these blinds, taken off or cut with scissors for metal (???), lying in the snow, not far from the I-180 parking lot ...

Dark waters of Soviet history. We only note the indisputable fact that even the murder or arrest of Polikarpov himself could not have dealt such a blow to the Design Bureau as the death of Chkalov on Polikarpov's plane. The Design Bureau lost its only support "at the top" and was fairly compromised in the eyes of Stalin. Undoubtedly, this whole mysterious story strengthened the negative attitude towards the “old cadres” and the established design teams that had already formed in the country's leadership. A.S. Yakovlev cites in his memoirs the following words of the Host:

> We believe you, even though you are young. You are an expert in your field, not connected with the mistakes of the past and therefore you can

be more objective than the old specialists, whom we really trusted, and they **led us with aviation into a swamp *(highlighted by the author).*** It was then that he told me:

“We don’t know who to believe…

Chapter 14
THE BIG RACE

“We don’t know who to believe ...”

Yes, the Chief Designer of Soviet aircraft, the Creator of Soviet aviation, the Best Friend of athletes, the Leader of the Peoples drove himself into an unenviable situation (the last title, by the way, was practically legalized - at least in the verdicts we read: “in conversations with colleagues, he showed disbelief in the leader of the peoples”), and it was not easy even for him to cope with this

situation. Comrade Stalin possessed a great many worthy qualities: great industriousness, a phenomenal memory, steely firmness of character, great personal courage (how could Trotsky, who had the entire army and half of the Cheka in his hands?), Personal modesty and disinterestedness (he actually slept on a soldier's bed and did not buy castles in the Austrian Alps for his daughter). He sent two of his half-blooded sons - Yakov and Vasily - to the front, to the very front line. Where they kill. Among the many virtues of Comrade Stalin, one of the most important was his great thirst for knowledge and self-education (he left 6,000 books with marginal notes). He even tried to force his close associates to study, but without much success. The nominal head of the Comintern, G. Dimitrov, describes in his diary how on November 7,

1940, the entire “inner circle” gathered at the Boss’s dinner, and Stalin addressed those present with the following admonition: “... Our infantry is now being rebuilt, the cavalry has always been good, we need to get ***busy seriously aviation and air defense. I now deal with this every day, I receive designers and other specialists. But I alone deal with all these issues. None of you think about it. I stand alone. After all, I can study, read, follow every day; why can't you do it? Do not like to study, live complacently. You are wasting Lenin's legacy."***

At this phrase, grandfather Kalinin woke up and, as Chairman of the Presidium of the Armed Forces, allowed himself to interrupt an ordinary deputy, Comrade Stalin: ***“We need to think about the distribution of time, otherwise there is somehow not enough time ...”***

It would be better if the well-known decrepit lover of the Bolshoi Theater and its ballerinas did not complain about his over-employment ... Stalin flared up: ***“No, that's not the point! People are careless, do not want to learn and relearn. They will listen to me and leave everything as it was. But I'll show you if I run out of patience. You know how I can do it. I’ll hit the fat people so that***

everything will crackle ... ” Further, Dimitrov writes: ***“ Everyone stood straight and listened in silence, apparently, they did not expect this from Joseph Vissarionovich.*** Tears appeared ***in the eyes of Voroshilov*** (by this time already removed from the post of People's Commissar of Defense. - ***M.S.) ... I have never seen or heard Stalin like that, as on***

Stalin really "stood alone." The constant use of the “rat king” method led to the fact that the upper echelon of managers was more and more filled with aggressively obedient (I wonder if this Soviet term can be translated into some European language?) individuals, whose dominance was manifested only in the ability to bite a competitor. In the intervals between the next acts of massacre, they practiced tongue-tied sycophancy of this kind: ***“From the depths of my heart I send you, dear friend and beloved Chief-leader, on the day of your glorious anniversary, the warmest congratulations ... After all, on your military and revolutionary path there were a lot events and phenomena exceptional in their significance, and that now*** (as in the text) they ***are getting even greater prominence and stand up like giant giants in the avenue of the upcoming future ... ” (71)*** No mind, no conscience, no sensible advice, no responsible execution it was impossible to

obtain these instructions from such personnel. Less than a year after the memorable dinner described by Dimitrov, Stalin had to send (August 29, 1941) cipher telegrams with the following content: “ ***What are Popov and Voroshilov doing?.. They are busy looking for new lines of retreat, in this they see their task. Where do they get such an abyss of passivity and purely rustic submission to fate? What kind of person is Popov? How,***

Actually, is Voroshilov busy? What kind of people - I don't understand anything ... " (106)

Not trusting anyone and surrounding himself with people who really could not be trusted with anything, Stalin was forced to do everything himself. And he tried to solve everything on his own. Stalin led the industry and cinematography, tried to delve into the problems of tank, aircraft, shipbuilding, personally resolved the issues of publishing the next masterpiece of social realism and replacing the control mechanism of the AM-35A aircraft engine, non-stop shuffling shots with input blades that did not solve anything, and personally signed long lists execution. With such an inhuman supercharger of "cadres" prepared for the next workload, management decisions inevitably fell. One can only be surprised that in this non-stop and most severe time pressure, Stalin sometimes made the right "moves". So, in the issue we are considering

about the development of military aviation on the eve of the war, at quality least two "precise hits" can be noted: Stalin abandoned the ambitious project for the mass production of the "flying fortress" "TB-7" (and for this business it was already built and equipped with the latest plant No. 124 in Kazan with American equipment) and, despite the objections of many military leaders, guessed the value of the Il-2 armored attack aircraft. There were many more mistakes. Many of them grew out of one common mistake - an incorrect assessment of the comparative level of development of Soviet aviation and the air force of alleged opponents.

The question of why at the turn of 1938-1939 Stalin had a suspicion, and then confidence that our aviation was "bogged down in the swamp of lagging behind the West", is very poorly developed in Russian historiography. To be honest, it has not yet been clearly formulated. For the time being, we will try to identify only two possible reasons that led to such a pernicious error in its consequences. The first one is simple and clear. The "young and unknown" also wanted orders, money and fame, so it can be safely assumed that Comrade Yakovlev whispered the

same nonsense to Stalin (about the helpless "donkeys" and the all-destroying "Messer"),

which he then loudly and throughout the country replicated in his memoirs. Without this, without vivid pictures of the "filthy swamps" into which the ***"old specialists whom we really trusted" brought aviation,*** it was impossible to "fill up" these highly experienced specialists and
destroy established design teams. The second was that

"intelligence reported inaccurately." Moreover, in all three aspects (performance characteristics of aircraft, production capacities, the strength of the Luftwaffe), mistakes were made in only one direction - in the direction of exaggerating the real situation in German and British aviation. Unfortunately, this trend continued in 1940-1941. Until the very beginning of the war, the pages of the top secret ***“Reports of the Intelligence Directorate of the General Staff of the Red Army on military equipment and the economy of foreign states” (16)*** were carried by mysterious fighters of an “unknown company” at a speed of 720–750 km / h. And the high-speed Heinkel-113 fighter, which was not in service with the Luftwaffe, was not only listed in intelligence reports, but was also shot down many times in air battles (mentions of the 113th stop only by the end of 1941). Against the background of such miracles of technology, the I-16 veteran really looked "hopelessly outdated." An indirect, but very convincing confirmation of the fact of systematic disinformation of the country's top leadership is the fact that Stalin could not believe that the planes shown to the Soviet delegations in Germany were really what the Luftwaffe was armed with. Yakovlev, who was a member of these delegations, writes that Stalin called him to him three times with the same question: ***“Did the Germans really show and sell us everything that they have in service; didn’t they deceive our commission, didn’t they slip their outdated aviation equipment on us? (86)***

The trips of reconnaissance and procurement delegations to Germany not only did not lead to the correction of previous mistakes, but also added new ones. At the beginning of 1940, the new people's commissar of the aviation industry A.I. Shakhurin reported to I.V. Stalin that, taking into account the aviation industry of the conquered countries and satellite states, the total capacity of the German aviation industry is

twice that of the Soviet one. The assessments of the combat strength of the proposed Luftwaffe grouping in the East were also absolutely fantastic:

	Истребители	Бомбардировщики	Пикировщики
По данным «Спецсообщения Разведуправления Генштаба РККА» от 11 марта 1941 г.	3 820	4 090	1 850
Фактическое количество боевых самолетов на Восточном фронте по состоянию на 22 июня 1941 г.	980	1 000	306

Note: Me-110s are classified as fighters or bombers according to the purpose of the air groups they were part of.

As you can see, a lot of people tried to ensure that Comrade Stalin had the opinion that the “old specialists”, whom he previously trusted, brought aviation and him personally into the “swamp”. Stalin categorically did not want to sit in a swamp (or somewhere else), so in January 1939 a large meeting on the problems of military aviation was held in the Oval Hall of the Kremlin. Almost all the leaders of the People's Commissariat, prominent military leaders, scientists, factory directors, and designers were present. Stalin, Molotov, Voroshilov sat on the presidium of the meeting. Over the years that have passed since then, not a single book on the history of domestic aviation has been published in which this meeting and the decision taken at it were not mentioned. The solution was to entrust 12 design teams with the development of a new generation of fighter. This decision has always been cited as an example of the great attention (and great concern) of the Party and the Government to the situation in the Soviet Air Force. One of the participants of the meeting (and the winners) in the announced creative competition, A.S. Yakovlev recalls:

> ... Stalin was pacing around the office in thought. “Do you know,” he asked, “that we are ordering the same fighters to some other designers, and the winner will be the one who not only gives the best fighter in flight and combat qualities, but also makes it earlier so that it can be launched faster.” into series production? “I understand, Comrade Stalin.

- Understand little. We need to make the car faster. — And what is the term? - The sooner, the better. Will you do it for the new year? - I have not been involved in the construction of such aircraft, I have no experience ... But the Americans make a new fighter in two years, so ... - Are you an American? Stalin interrupted me. — Show what a young Russian engineer is capable of...

And this episode was repeatedly quoted and retold, again - with enthusiastic aspiration. The competition was really interesting. Elections can serve as the closest analogue to today's life. Any provincial or mayoral elections anywhere in Russia. A lot of noise, a lot of din, the whole city is plastered with posters with promises to give everyone, everything at once. 12 candidates compete. Of these, 10 are just like that, no one knows them and will never choose them, they are present in the electoral race only due to cunning ideas of political technologists.

There are two real contenders for victory. They are real, not because they are the smartest (or, which would be completely ridiculous, the most honest), but because it is behind them that two large criminal-oligarchic clans stand, the struggle between which will determine the winner. Moving from metaphors to life, it remains only to recall that 12 (twelve) design bureaus capable of developing such a complex combat system as a fighter aircraft does not exist and never existed in any country in the world. In Nazi Germany, despite no less striving for world domination, serial fighters were designed by exactly two companies (Messerschmitt and Focke-Wulf), and even sometimes, at the stage of competitions, Heinkel and Dornier. England (which then was not just England, but the British Empire with a territory twice as large as the territory of the rather large Soviet Union) recaptured all

world war on fighters of two firms: Supermarine (Spitfire) and Hawker (Hurricane and Tempest). Super-rich America, located

in super-favorable conditions (five thousand kilometers of ocean expanses from the war), having a powerful scientific, technical and industrial base, a world leader in aircraft engine building, armed its own (and others') Air Force with fighters from five companies: Lockheed (P-38 Lightning), Bell (P-39 Airacobra), Curtiss (P-36 Hawk and P-40 Tomahawk), Republican (P-47 Thunderbolt), North American "(P-51 Mustang). Where in the Soviet Union, which only in the 1930s began to recreate the

scientific and production potential of Russia destroyed in the "revolutionary" hard times, could the engineering personnel sufficient to create 12 new aviation design bureaus come from? It is noteworthy that Yakovlev himself in his memoirs claims (though without citing any specific figures) that more engineers were employed in the firm of V. Messerschmitt alone than in all the aviation design bureaus of the Soviet Union! It seems that in this case, Yakovlev is not far from the truth. So, already at the end of 1933, two years before the first flight of the Bf-109, Messerschmitt had 524 employees. (18) At the end of 1943 there were already more than 2 thousand people. And in the four leading aviation design bureaus of the USSR (Polikarpov, Ilyushin, Arkhangelsk, Sukhoi), as of January 1, 1940, there were 825 employees, in total, there were 1267 designers in 17 design bureaus. (105) True, according to the classic monograph “Aircraft Building in the USSR 1917–1945.” 3166 engineers worked in 30 aircraft design bureaus. (2)

By modern standards, this is not enough to staff one large aviation design bureau. Even with all the reservations on the topic that “before the people worked differently”, even taking into account the fact that the modern aircraft has become much more complicated, we still have to state that the situation that existed in the mid-30s, when everything was experienced -design work was concentrated in almost three leading design bureaus (Tupolev, Polikarpov, Ilyushin), was the only possible one. As for monopoly, which always leads to "decay", then in the field of development of military equipment, a competitor that does not allow "rest

on their laurels, always exists. This is an adversary, a tough confrontation with which spurs the progress of engineering no worse than the competition of development firms within the country. Stalin's decision to simultaneously

design 12 fighters at once can be characterized either as a gross and unjustified mistake (colloquially, this is called the word "stupidity"), or as a desire to launch the "rat king" breeding mechanism, which he had so effectively tested earlier, in 37- m-38th years, on the party and military elite. Most likely, the second assumption is correct. Stalin was not a fool and should have understood perfectly well that "even nine pregnant women cannot give birth to a child in one month." Moreover, newborn design bureaus, having neither personnel, nor a production base, nor design experience, nor test benches and laboratories, even in a normal “nine months” could not give birth to either a princess or a frog, but only one “unknown little animal”.

Or maybe not. Maybe Stalin really thought. that scientific and technical problems can be solved in exactly the same way, with the help of which, two years later, millions of citizens, women and old people, will dig an unmeasured number of anti-tank ditches, none of which stopped German tanks (but later came in handy for the invaders as a ready place for mass executions). Anything can be. Let us leave the solution of the question of the motives of Comrade Stalin's actions to the mercy of numerous Stalinists and Stalinists and turn to the history of military aviation. How and how did the Great Races, which started at the January meeting in the Oval Hall of the Kremlin, end? The first of the real contenders for success was

the clan of the Kaganovich brothers. At the end of the 1930s, the Kaganoviches were sitting very tightly - almost the entire military-industrial complex of the country was in their hands. Elder brother (the hand itself reaches out to write this word with a capital letter ...), member of the Politburo and secretary of the Central Committee of the CPSU (b) L.M. Kaganovich, at the end of 1938, was in charge of heavy engineering, the fuel industry (oil and coal) and transport. MM. Kaganovich commanded only one People's Commissariat, but which one - the People's Commissariat of the Defense Industry! Against this background, Y

who got "only" the chair of the First Secretary of the Gorky Regional Committee. At the beginning of 1939, Stalin decided to besiege the presumptuous brothers a little: on January 24, 1939, L.M. tyazhmash was taken away (Malyshev became the people's commissar of heavy engineering), and on January 11, 1939 the people's commissariat of the defense industry was divided into 4 armaments). (aviation, shipbuilding, ammunition, people's commissariat of MM. Kaganovich got only one "slice", but the most valuable - the aviation industry. Add to this the personal friendship of L.M. with the Boss himself, as well as exceptional rudeness, impudence and ignorance, which both brothers equally possessed - and it will become clear to you why M.M. believed that victory in the competition for the development of a new fighter was already in his pocket. Two projects can be pointed out, which, without a doubt, were promoted

under the “roof” of M.M. Kaganovich. One of them degenerated into an outright farce, the second led to the creation and launch into serial production of the LaGG-3 fighter (whose name on all fronts was deciphered as "lacquered guaranteed coffin"). At M.M. Kaganovich had a daughter. And my daughter had a husband. Both that and

the other is nothing to be ashamed of.

A year before the historic meeting in January 1939, M.M. decided that his son-in-law, Alexander Vasilyevich Silvansky, born in 1915, a graduate of the Moscow Aviation Institute, deserved to be the Chief Designer of something. The three components necessary for this: the factory, the design bureau, and a good fighter project, were assembled quickly. It so happened that it was at this time that the oldest aircraft designer of Russia, D.P., died. Grigorovich. 20 engineers from the Grigorovich Design Bureau formed the backbone of OKB-153, created by order of M.M. Kaganovich February 1, 1938 on the basis of plant number 153 in

Novosibirsk. Well, the fighter project was taken in the only place where it could only be taken - from Polikarpov. The fact is that back in April 1935 (!) Polikarpov began developing the TsKB-25 fighter - it was still the same "donkey", but with the French engine "Gnome-Ron" "Mistral-Major" (later this engine at plant number 29 in Zaporozhye turned into the M-88, and the TsKB-25 project turned into a real I-180). The TsKB-25 project was handed over to

the newborn Silvansky Design Bureau, and work on the fighter, called the I-220, began to boil. They say a girl subconsciously

chooses her husband

a man who looks like her father.

They speak the truth. The son-in-law in his impudence was not inferior even to the famous father-in-law. In April 1939, Silvansky called Polikarpov, who had been robbed by him, to a competition: ***“In accordance with the order of the people's commissar of the aviation industry, No. 80 M.M. Kaganovich dated April 7 this year, I ask you to accept the challenge for the social competition in experimental aircraft construction for 1939 on the same type and the same task for the I-220 aircraft, designed by me and under construction at plant No. 153, with the I -180 ", designed by you and built by plant No. 156. I ask you to notify me about accepting the challenge and at the same time inform the chairman of the technical council at the People's Commissariat Comrade Golyaev." (105)***

In August 1939, the I-220 was manufactured. The first run was made on September 25th. Then the aircraft was transported to Moscow for purging in the TsAGI pipe and flight tests. Sylvansky was not going to travel around Moscow and its environs in any kind of emka, so he took with him from Novosibirsk the representative ZIS-101 of the plant director. The first embarrassment happened when they tried to screw a propeller to the “Silvansky plane”. The MAI graduate did not think in advance that the TsKB-25 project was developed for a different engine (actually, the M-87 was on the I-220) and a different propeller. In addition, Sylvansky had the imprudence to change the design of the chassis. As a result, the screw clung to the ground - an unheard-of case in the history of aviation (this, of course, happens in student projects, but only among hardened losers). History is not yet known - who exactly drew course and graduation projects for Silvansky - but the decision of the "young designer" was made quickly and decisively. He ordered to cut the blades of the propeller to the desired size "according to the conditions of existence". Now everything was ready for the first flight. A pilot is needed to conduct flight tests. I hope the reader already guesses where they took the pilot. February 17, 1940 E.G. Ulyakhin, the new (after the death of V.P. Chkalov) chief pilot of the Polikarpov company,

tried to take off, but the plane after the "circumcision"

the screw did not even want to get off the ground. Later, the pilot Lisin managed to make several "jumps", and this turned out to be the limit of what was possible. With grief, Sylvansky began to wonder. He ordered to put a regular, uncut propeller on the plane, and in order for the blades not to cling to the ground during takeoff run, the “young, unknown designer” ordered ...

He ordered to dig a deep ditch along the runway. Here the patience of the participants in the process burst. It will not be superfluous to note that by this time Stalin had already expelled M.M. Kaganovich from the post of People's Commissar of the aviation industry, and expelled him with a bang and shame. “Those who are supposed to hit the right place” (forgive me, future translator), and Sylvansky's scam was stopped. Moreover, in the second half of 1940, a criminal case was even opened against Silvansky: ***“for the unauthorized removal of the ZIS-101 car from the territory of the state Union Plant No. 153.”*** But everyone got off with a slight fright, and after 15 years A.S. Silvansky became the chief designer at the Central Design Bureau of the All-Union Research Institute of Hoisting and Transport Engineering. His indomitable attraction to designing devices for lifting something up could be the subject of research for a psychoanalyst ...

Just as absurd to the point of anecdotal was the history of the creation of the LaGG Design Bureau (Lavochkin, Gorbunov, Gudkov). At the end of 1938, a young designer (born 1900) S.A. Lavochkin went to work as an "aviation bureaucrat" in the First Main Directorate of the NKOP (the future People's Commissariat of the aviation industry). Prior to that, Lavochkin worked in several design bureaus, little known to the general public, and already had a solid experience as a designer - although not the main one.

Further, the events (as presented by the future closest collaborator, and then the deputy of Lavochkin, S.M. Alekseev) developed as follows:

> ... Once Gorbunov (head of the GUAP department in which Lavochkin worked) summoned Semyon Alekseevich:
>
> “Listen, Semyon, you are probably tired of copying letters in our GUAP. Let's try to come out with a petition - with a proposal

build a fighter. Now the situation is very favorable for this ... In two or three weeks, Stalin will again hold a meeting to analyze the Spanish events. I will allocate a separate room for you, attach a typist to you - sit down and work ...

In about a week, Lavochkin drew up a draft of a fighter project with an M-105 engine and a cannon installed in the collapse of the cylinder block. Gorbunov took the papers and, together with Lavochkin, went to the chief.

Gudkov (another employee of Gorbunov's department, who dealt with the supply of aircraft factories) was sitting in Kaganovich's waiting room. Gorbunov asks him: - What are you doing here? -

Here, I want to sign with Mikhail Moiseevich a few letters...

... All three of them entered: Gorbunov. Lavochkin and Gudkov. Kaganovich, of course, turned to

Gorbunov: - Well, what do you have,

Vladimir Petrovich? - Mikhail Moiseevich, here we are to tell you about our proposal - a new fighter.

Gorbunov began to report, showed new material - delta wood. Kaganovich, apparently, was pleased:

- Well, that's very interesting. I will try to report your proposal to the government. It is very interesting that all three of you will be making one aircraft. Congratulations! They left the office, and then Gudkov begged: - For God's sake, don't push me away from you. I will also participate with you as much as possible...

The first few months of work were carried out on the basis of the “ski and propeller factory” in Kuntsevo, then, in May 1939, after the development of a new fighter was agreed at all levels, the design bureau was transferred to the 301 plant near Moscow. Accordingly, the aircraft received the designation “I -301". Plant No. 301, as we wrote above, was a furniture factory, which was to equip the future

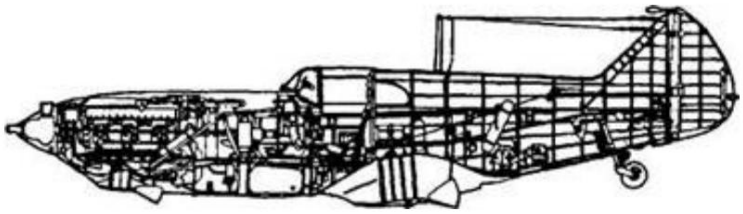
the Cyclopean Congress Palace with furniture made from a new material, the so-called "delta wood". However, there is nothing very new or tricky in it, it is just a heavy multilayer plywood impregnated with special phenol resins. The technological capabilities of the furniture factory (as well as the personal experience of Lavochkin himself, who, in addition to his office work at the SUAI, moonlighted as designing boats from “caplurite” similar to delta wood) predetermined the main feature (an all-wood aircraft with load-bearing elements from delta wood) and the main, unremovable the flaw of the future fighter is its enormous weight. The empty weight of the I-301 was 2680 kg (the Polikarpov I-180, with the same engine power, had an empty weight of 1815 kg, the Messerschmitt of the E series - 2184 kg). It is hardly worth discussing further the performance characteristics of a fighter with such a weight ...

However, the people's commissar of the aviation industry, Comrade Kaganovich, had his own opinion on this matter, and work on the I-301 proceeded at an increasing pace and scope. It is curious to note that after the dispersal of the Silvansky design bureau, the best specialists who Silvansky had inherited from the design bureau of the late Grigorovich were transferred to

OKB-301. Of course, the leadership of the new design bureau also strengthened. S. Alekseev recalls: ***“When the drawings were ready and the construction of the first experimental machine began, Gorbunov had some family affairs, he met a woman ... and stopped going to the factory regularly. Gudkov fiddled with production, but after all, someone had to sign the technical documentation, submit the aircraft to the commission and for testing. All the heads of the teams gathered at the plant director and began to decide what to do ... Everyone agreed that Lavochkin should be the chief designer: Gudkov was busy with secondary matters, and Gorbunov did not go to work ... They assembled a collegium of the People's Commissariat and ap***

Nevertheless, “responsible” is not yet the main one. The aircraft was later named “LaGG”, and the name “La” (“La-5”, “La-7”) was switched to only after a tragic event: while riding in a boat with a woman whose last name we replaced with an ellipsis, Gorbunov fell out of board and drowned ...

In early March 1940, the I-301 was ready for flight tests. The best master cabinetmakers of aircraft factory No. 301 (furniture factory) did their best. The plane was covered with a dark cherry varnish and polished to a mirror finish. Next to other experimental machines, the I-301 looked like a Mercedes next to a Zaporozhets or UAZ with a canvas top. Technicians immediately dubbed the plane a "piano". Mirror shine later played a big role in the fate of the aircraft and its creator. The polished surface has low friction resistance. This allowed the heavy aircraft to reach the same maximum speed (570–580 km/h) as the much lighter Yakovlev and Pashinin fighters equipped with the same M-105 engine (which will be discussed later). But when production moved from a furniture factory to a serial plant, a large and fraught conflict with the customer arose: serial fighters (which, of course, no one polished) “did not pick up” speed compared to the approved standard.



"LaGG-3"

Despite the whole frantic race with the launch of another new fighter, the start of factory tests of the "I-301" was delayed for two whole weeks by one episode, quite remarkable for understanding the "spirit of the era". On March 25, 1940, at the airfield of the Moscow aircraft plant No. 39 (the furniture factory did not have its own runway, so it was decided to conduct flight tests of the I-301 at the 39th plant), high officials headed by a young (35 years old and 74 days at the post of People's Commissar) by the head of the NKAP Shakhurin. The most experienced test pilot V.A. Stepanchonok did not know the face of the new people's commissar, while Shakhurin, without introducing himself, as required by the Charter and by generally accepted standards of decency, attacked the pilot with threats and insults. Here is how Stepanchonok himself described the situation in a letter addressed to Stalin:

> ... I was at the airfield, but the plane was not prepared, and the tests were decided to be postponed to a later time after the preparation of the machine ... A group of people stood behind the plane. I approached and greeted... A stranger (as I later found out, comrade Shakhurin) attacked me in a sharp, raised tone, accusing me of social work during working hours, of delaying the car and declaring that it was possible to fly. I was literally amazed at such a completely unfounded accusation and, indignant,
>
> answered:
>
> - If you think that you can fly, fly yourself (although, according to the version of the most "offended" people's commissar, stronger expressions were also used). ... There is a
>
> special instruction on the release of an experienced aircraft into the air. Permission to take off is given only by the people's commissar himself after the presentation of the act of the commission on the readiness of the aircraft. This act did not have my signature, and Comrade Shakhurin should, first of all, take an interest and find out why this is so. Immediately **after the removal of me, comrade. Shakhurin ordered the factory pilot comrade. Fedorov to test the car *(highlighted by the author).*** He, having made a short run, **declared that he was ready to take off, and signed the act.** Fedorov did not fly modern fighters, he did not study the materiel. Such an attitude characterizes the underestimation of complex technology and the neglect of elementary rules and precautions. Tov. Fedorov, in addition to Comrade. Shakhurin, the measures taken from testing the aircraft was set aside.

(113)

It would seem that the situation is extremely clear: it was necessary to apologize to the pilot and continue the work interrupted due to a stupid misunderstanding to prepare the aircraft for the first flight. But it was not there - Shakhurin began to "swing rights", the Air Force Research Institute, in which Stepanchonok carried out his dangerous service, began to defend his innocence, and all this "bodyaga" dragged on for two weeks. In the end

agreed that test pilot A.I. Nikashin. Fortunately, he did not rush to "sign the act." ***“Nikashin impressed us with his high technical culture ... He studied the aircraft for about a week. He demanded all aerodynamic calculations and strength calculations. Such severity seemed unusual, but Nikashin experienced the car superbly.*** (109) And Vasily Andreevich Stepanchonok died on April 5, 1943. A piece of copper safety wire was under the carburetor valve seat. And this happened again during the tests of the Polikarpov fighter, this time the I-185 ... Be that as it may, with or without obscene abuse, the tests showed that the heavy aircraft is inferior to its competitors in rate of climb, in horizontal and vertical

maneuverability . Yes, and Lavochkin himself - let's give him his due - understood and openly admitted that the experiment with an airplane of "furniture design" gave a negative result. On July 3, 1940, at a meeting of the Technical Council of the Air Force Research Institute, he described the situation with the I-301 as follows:

> The government has set us the task of somehow bringing the weight of a wooden aircraft closer to that of a metal one ***(the meaning of the phrase is that metal, as a rule, is lighter than solid wood).*** It is possible that we overdid it with weight ... This is a big problem, because we are dealing with a completely new material ***(a new material with unexplored and unstable properties forced us to accept large safety factors, which led to a heavier structure.*** - M.S.). Of course, there are a number of mistakes here, we know them, we did not finish this business ... It's right that the weight of the car is great. Suprun ***(test pilot):*** — Couldn't it be easier? Lavochkin: - We think that we can remove 100 kg, **no more** (highlighted by the author) ...

(113)

Alas, in order to turn the LaGG into an aircraft competitive with the I-180, Yak-1, Bf-109, it was necessary to “remove” not 100 kg from it, but at least half a ton. In addition, initially the “furniture” design was very laborious (the entire fuselage was assembled with glue, which required the strictest compliance with the requirements for temperature, humidity and dust content in the assembly shop) and was completely unsuitable for mass mass production. It would seem that this aircraft did not have the slightest chance of winning the "competition for the prize of Comrade Stalin". And Comrade Kaganovich was no longer in the post of People's Commissar of the aviation industry. But the miracle did happen. We will talk about it a little later, but

for now, back to the starting point of the Great Races, in the spring of 1939.

Emboldened under the high patronage of M.M. officials of the NKAP have already openly "pressed" Polikarpov. At the end of 1938, his design bureau was not even included in the financing plan; continued and continued on the whole successfully. May 1, 1939. "I-180" took part in a festive air parade over Red Square - according to a well-established, albeit unofficial tradition, this meant the recognition of the new aircraft by the country's top leadership. On June 9, 1939, a joint meeting of representatives of the NKAP, Design Bureau, Plant No. 21 was held, dedicated to the introduction of the I-180 into the series. Finally, on July 29, 1939, a resolution of the Defense Committee under the Council of People's Commissars of the USSR "On the introduction of modified fighter aircraft into serial production in 1939" was issued, which, among other things, obliged the director of the Gorky Plant No. 21 Voronin to manufacture the first 3 I-180 aircraft with an engine M-88 from the military series by October 1, 1939. Full-scale serial production of the I-180 was to begin in the first quarter of 1940 (105). As Comrade Stalin said: ***“The winner will be the one who not only gives the best fighter in terms of flight and combat qualities, but also makes it earlier so that it can be put into production faster.***

production". Comrade Stalin's instructions have been fully implemented. At a time when the design teams of Yakovlev, Lavochkin, Pashinin, Nikitin, Kozlov (there was no “Mikoyan Design Bureau” at that time) were only drawing center lines on the general drawings, the I-180 fighter really flies and demonstrates in the air those parameters that young engineers still have only in calculations. The aircraft is at the stage of completion of state tests and preparation for mass production. By design, it is almost identical to the I-16 fighter, the mass production of which has long been mastered at plant No. 21, so there should not be any special problems with the mass production of the I-180. Why are you more? The second crash and the death of another pilot occurred on September 5, 1939. At the end of the

state tests of the I-180 (it was already the 53rd flight), test pilot T.P. Susie flew to reach the maximum ceiling. Something happened at high altitude. According to eyewitnesses, the plane descended steeply (according to other sources, it went into a spin), then at an altitude of 3000 m it independently switched to level flight, flew normally for a while, and then went into a spin again. At an altitude of 300 m, the plane again came out of a spin, and then the pilot left the car, but did not use the parachute. Plane crashed, T.P. Susie is dead. No matter how blasphemous it sounds, even the tragic incident demonstrated the excellent aerodynamics of the I-180: the plane came out of a spin on its own twice, and at different altitudes. What caused the disaster? There is no single answer to this question. All three assumptions made by the state commission are related to the failure of the pilot: a sudden heart attack, blinding the pilot with hot oil from the engine, loss of consciousness due to a malfunction of high-altitude oxygen equipment. (99, 103)

The sad fact is that the death of testers (plural) during the development of new aircraft was at that time not an exception to the rule, but an insurmountable norm. In all countries, not

only in the Soviet Air Force. And the catastrophe that happened on September 5 did not yet become the reason for curtailing work on the I-180, but at that moment completely inexplicable events began at the Gorky Plant No. 21.

The director of the plant refused to make the I-180. Yes, that sounds like complete bullshit. Even in super-liberal “stagnant” times, nothing like this, even close to similar, happened. Nevertheless, the leadership of the NKAP and the Air Force adopted one resolution after another, one after another the dates for launching the I-180 into production were set - and the plant management brushed them off like an annoying fly. People's Commissar of the Aviation

Industry M.M. Kaganovich personally came to Gorky in order to give a good "thrashing" to the director - no reaction. At the end of January 1940, a joint commission of the NKAP and the Air Force arrived at the plant, chaired by V.P. Balandin - Deputy new head of the NKAP Shakhurin. On January 30, another decree was issued demanding that serial production of the I-180 be started from February 1940. The management of the plant ignored this order. All this fantasy took place at the very time when heads were flying for the smallest mistakes in the work. March 15, 1940. Polikarpov writes the following to the People's Commissariat for the Aviation Industry:

> 2. Plant No. 21 has been building I-180 aircraft for 8 months, during which time **at least 7–8 official deadlines *(highlighted by the author)*** for the production of the first three and then the rest of the aircraft were appointed, and, despite all this, until now The plant has not yet produced **a single aircraft.**
>
> 3. The plant started in November - December last year to produce serial drawings and prepare production for the serial production of the I-180 aircraft, but, without completing this work, it stopped it and is not going to continue ...
>
> ***(105)***

Is it necessary to say that such sabotage and sabotage became possible and turned out to be completely unpunished only because very influential people stood behind the director of the plant, whose orders (tacit, but mandatory) he only carried out? It turns out that it is necessary - since to this day many authors continue to associate the refusal of plant No. 21 from

manufacturing "I-180" with the project of the Pashinin fighter, which (the project) allegedly liked Voronin so much that he easily and simply "sent" the leadership of his native people's commissariat and customer (Air Force). This version, in our opinion, is simply absurd. Even the artistic director of the House of Culture in the village of Gadyukino was not at that time free to choose the repertoire of the productions of his drama circle. The director of a huge military plant, and even in the Soviet Union, and even in 1939, produced the equipment that he was ordered to do, and there could be no talk of any personal predilections in this matter. All this is very clear. Another thing is completely unclear - who exactly, which of the warring clans in the “inner circle” of the Boss was behind the mysterious events at plant No. 21? The author of this book has no answer to this very important question yet.

Chapter 15
FASTER EVERYONE

While fatal passions were boiling in the homeland of the “great proletarian writer” M. Gorky, the first winner of the Great Races was determined in Moscow. They became Anastas Ivanovich Mikoyan, a quiet and inconspicuous party functionary to the general public. And his position was somehow awkward: Minister of Trade in a country where the word "market" was not even a curse, but a terrible political accusation.

Quietly, modestly and imperceptibly, Comrade Mikoyan carried out Comrade Stalin's most delicate orders. For example, it was he who, with the help of Western speculators, pulled off a grandiose scam to sell abroad the collections of the Hermitage, the Museum of New Western Art in Moscow, as well as valuables confiscated from the royal family and the highest representatives of the Russian nobility. Just as modestly, without creating unnecessary noise, in September 1937 A.I. Mikoyan asked to increase the limit on execution by 1500 people in the Armenian SSR in addition to the "plan" established by Yezhov's famous order No. increased by 10–15 times). After the conclusion of the Pact with Hitler, none other than A.I. Mikoyan, controlled the implementation of the entire financial and economic component of the deal between the two dictators. Comrade Mikoyan knew and could do a lot of things, but at the same time he did everything carefully, he “did not shine” in public, and therefore he lived until 1978. As the people said: "from Ilyich to Ilyich without a heart attack and paralysis." As of the end of 1939, Anastas Ivanovich Mikoyan was a member of the Politburo, served as deputy head of government, people's commissar for foreign trade and a person who was in the closest circle of Stalin's associates. And for such a trifle as the position of the chief aircraft designer for his own brother Artem Ivanovich, Anastas Ivanovich had every right “according to concepts”.

Here the author will allow himself to express one hypothesis, which cannot be proved by anything and in any way. If Mikoyan the chief invited to his

Polikarpov’s office, poured something Armenian into cups and purely “boyishly”, kindly, kindly explained to the designer that his I-185 fighter (not to be confused with the ready-made, and therefore already outdated " I-180") should be called "MiG", then Polikarpov would certainly agree. Remember what Shakhurin wrote about him? ***“Despite his worldwide fame, he was extremely modest. I have never met another such person in my life ... Polikarpov was very diligent in carrying out the decisions made on his aircraft ... ”*** And everything would have been very good. The most powerful, the best

aircraft plant in the country No. 1, the coolest "roof" in the face of a member of the Politburo, an excellent fighter project and a brilliant engineer as a leading specialist in the so-called Mikoyan Design Bureau. If not in 1941, then in 1942 our fighter aviation would have fought on the best aircraft in the world ... But THEY didn’t want it to be better, and they did it, as always:

boorish, rude and stupid. From a young age, Artem Ivanovich Mikoyan

followed in the footsteps of his older brother: at the age of 20 he was already a member of the All-Union Communist Party of Bolsheviks, and at 23 he was the secretary of the party organization of the Oktyabrsky tram depot in Moscow. Then in his working biography there is a string of secretarial chairs in different places. In 1931, A.I., not having a completed secondary education, went to study at the Air Force Academy. Zhukovsky. Upon completion of his studies, he has been working since 1937 as a military representative at the Moscow aircraft plant No. 1. Here the paths of Mikoyan and Polikarpov crossed. The fact is that at the beginning of 1939, the Design Bureau moved once again: plant No. 156 was transferred to the disposal of the “sharashki” of the NKVD OTB, and Polikarpov was transferred to plant No. 1, where the production of the I-153 biplane “Seagull” was being deployed at that time . In March 1939, a young specialist (34 years old and 2 years after the academy) Artem Mikoyan was transferred to work in the design bureau, where he was immediately appointed head of the brigade. Thus, those who claim that A.I. had “no design experience”, they are mistaken. Prior to his transformation into General Mikoyan, he worked as a designer

bearing a baby.

From November 25, 1939, Polikarpov was not at the plant, nor in Moscow, nor even in the USSR. He (like A.S. Yakovlev) as part of a large delegation left for Germany. This moment Mikoyan is the main and completely joined (or rather, clung to) M.M. Kaganovich was considered ideal for the finishing dash. M.M., who was expelled from the post of People's Commissar in a matter of weeks, was in a hurry to enlist the support of A.I. Mikoyan (“our horse is from the market, your trotter is to the market”). On December 8, 1939, Kaganovich issued several orders at once, one more interesting than the other. On the basis of plant No. 1, the "Design Bureau No. 1 for maneuverable fighters" was created. The head of KB-1, who is also the Deputy Chief Designer of Plant No. 1, is Comrade Mikoyan A.I. At the same time, an “experimental design department” (OKO) is being created at the same plant No. 1. Chief Designer - Comrade Mikoyan A.I. It is noteworthy that at the time of his sudden “ascension to the kingdom”, Artem Ivanovich was on vacation, which the “young, unknown designer” spent at the government sanatorium “Barvikha”. The specific meaning of all this fuss and haste was to order to transfer to the newborn OKO one of the many draft designs that Polikarpov worked on (the I-200 fighter), and in addition to it, more than 80 of the best specialists of the Polikarpov Design Bureau . V near Moscow

Thus, Kaganovich took into account the sad

experience of his son-in-law, to whom the stolen project, but without specialists capable of bringing it “to mind”, did not go for the future. Then, engineers were transferred from the Polikarpov Design Bureau to the notorious OKO on a “voluntary basis”, explaining to them that the days of the “priest’s son and pest” were numbered, and those who wanted to “win the right to life” should run to Mikoyan. Returning from Germany, Polikarpov found only ruins at the site of his unique design team. At the same time, Nikolai Nikolayevich himself formally continued to be listed as the Chief Designer of Aircraft Plant No. 1, and, even more amusing, the I-200 fighter (future MiG-3) continued for some time to be called the “Polikarpov fighter” in the orders of the people's commissariat. (94) Finally, in February-June 1940, the remnants of the design bureau were

transferred to "factory No. 51". True, there was no plant yet, it was only to come.

create on the basis of TsAGI production workshops. From that moment on, after Polikarpov was deprived of the production base (plant No. 1 went to the Mikoyanov clan, there was outright sabotage at plant No. 21), there was no doubt: the “young and unknown” would definitely outstrip the patriarch of Soviet aviation in such an interesting, fair competition. However, this is not the main thing. There was a war ahead. Millions of Soviet people were to die in this war. Against the backdrop of such a perspective, it is not necessary to discuss at length the issues of personal ambitions and personal insults. It is much more important to understand something else: what exactly, what project, what aircraft was stolen, stolen, communized from Polikarpov.

In the mid-1930s, the AM-34 aircraft engine designed by A.A. was developed and put into serial production in the Soviet Union. Mikulin. It was the first serial aircraft engine of a truly domestic design (all the rest, until the beginning of the 40s, were “renamed” American, French and German engines). Subsequently, on the basis of the AM-34, a whole series of engines was created (AM-34FRN, AM-35, AM-38), which lifted into the air both the PZ light reconnaissance aircraft and the TB-3 and TB-7 heavy bombers ", and the legendary IL-2 attack aircraft. Polikarpov began to develop the first project of a fighter with an AM-34 engine back in 1935. (PO) Calculations showed the possibility of achieving a speed of about 530 km / h on this fighter, called the I-19, which was an excellent indicator for that time, but at the beginning of 1936, all work on the I-19 was curtailed. In 1939, Mikulin was already working on the AM-37 high-altitude engine, with a very powerful supercharger and a radiator for cooling the

air compressed in the compressor. Recall once again that it was for the future AM-37 that the Tupolev ANT-59 front-line bomber, the Er-2 long-range bomber, the Myasishchev Project-102 high-altitude bomber, and the Grushin Gr-1 twin-engine escort fighter were developed. ". Polikarpov was interested in the possibility of creating an aircraft based on this engine, unusually heavy (both in absolute and specific gravity) and bulky for a fighter engine. By the summer of 1939, the project of a new fighter, which received the designation "I-200" (aka

"Product K", aka "Product 61"), was ready. The calculated speed characteristics of the I-200 were phenomenal: the maximum speed was 670 km / h at an altitude of 7 km, the climb was 5 km in 4.6 minutes. (“Messerschmitt” of the E series took 6.3 minutes to do this.)

With two TK-35 turbochargers, the maximum speed increased to 717 km/h at an altitude of 11,600 m. -35 was not

there yet. There was an AM-35 motor, which had almost the same dimensions and mounting locations as the AM-37, but less powerful and high-rise. Yes, and this motor, unfortunately, was just emerging from the stage of "childhood illnesses". In addition, the long and heavy engine worsened both the visibility from the cockpit and the longitudinal controllability. The design of the AM series engines did not allow the installation of a cannon firing through a hollow propeller hub, so the armament of an aircraft with such an engine required either the installation of cannons in the wings (decrease in shooting accuracy, deterioration of lateral controllability due to mass spacing relative to the axis of symmetry), or the development of special cannon synchronizers for firing through the plane of rotation of the propeller (reducing the rate of fire, complicating the design).

In a word, the I-200 project was still very "raw" and required significant modifications.

Polikarpov was also not satisfied with the design and power diagram of the rear fuselage, copied from the I-16, which was already rather outdated and completely unsuitable for the technology and equipment of plant No. 1. The main problem was to determine the scope of the optimal application of the I -200". High-altitude bomber interceptor? But neither England, nor Germany, nor Japan (the most real opponents in a future war) even had high-altitude bombers in the project, moreover, the I-200 machine gun armament clearly did not correspond to the task of destroying heavy bombers. Front line fighter? In this role, the I-200, despite its high speed over the entire range

of altitudes, was inferior even to the I-180 (poor maneuverability, poor visibility, large landing speed for working from unpaved airfields, weak for a fighter of the 40s weapons).

For these reasons, Polikarpov did not report on the I-200 project “upstairs”. Why did Mikoyan grab hold of this project? To answer this question, it is necessary to find out the rules and conditions for summing up the results of the "competition for the prize of Comrade Stalin." It is strange why, having written so many pages, the author has never mentioned the terms of reference on the basis of which the new fighters were designed. How can you race without knowing exactly which direction to run, where to start and where to finish? For example, the authors of a monograph on the development of the production of the Messerschmitt-109 write that ***"the technical requirements of the Luftwaffe were very vague" (18)*** Very vague requirements, on the basis of which in 1935-1936 the Luftwaffe chose a new fighter from four machines (companies " Arado", "Messerschmitt", "Focke-Wulf", "Heinkel"), included such performance characteristics as the composition of weapons, the angular rate of roll, the time to complete a steady turn, the ability to dive with full throttle and other technical wisdom. The Kremlin Master acted even wiser: he reserved for himself complete freedom in summing up the results of the “competition”, the conditions of which only he knew. There was also a more serious reason for the lack of a coherent and conscious technical policy - who was to develop it? Several pages (not lines, of course, but pages) of the terms of reference for the development of a new fighter is an intellectual product of the highest category of complexity. One must "see" the battlefield (sky) of a future war, one must perfectly know the state of one's aviation science and industry, one must understand and "feel" how a pilot will work in this aircraft. And a lot more you need to know and be able to compose these two pages with the inscription “Owls. secret" in the upper right corner. Stalin himself could not be an expert in all these (and thousands of other) issues, he transplanted real specialists, he did not trust the new environment. People's Commissar of Aviation Industry M.M. Kaganovich, together with People's Commissar of Defense K.E. Voroshilov had two classes of education for two (Voroshilov still went to elementary school for two winters).

In such a situation, only the one who guessed the leader’s momentary tastes, or rather and better, could impose them on him (this is what distinguishes

bureaucratic "undercover fuss" from a normal technical competition). Vivid and

memorable pictures of what, on the eve of the war, replaced the serious and painstaking work on shaping the appearance of a new generation of combat aircraft, are scattered across the pages of the memoirs of the leader's favorite adviser, A.S. Yakovlev.

... In the office, Stalin and Voroshilov about something animatedly talked. We greeted each other, Stalin immediately asked:

- Here we are arguing with Voroshilov, what is more important for a fighter - speed or maneuver? Are you sure that we are not mistaken in focusing on fast fighters? "I'm sure, Comrade Stalin," I replied. "I think so too," Stalin said, "but he doubts.

- Stuffy today. - Voroshilov unbuttoned the collar his marshal's tunic...

... Stalin asked a few questions ... I was amazed at his knowledge. He spoke like an aviation specialist.

"What do you think," he asked, "why do the British put small-caliber machine guns on Spitfire fighters, and not cannons?" "Yes, because they don't have air guns," I answered. ***(The 20-mm cannon of the Hispano-Suiza, which was in service with French, British and American aircraft, was put into production in 1935, that is, four years before the conversation described by Yakovlev.)*** ***- I think so too, -*** said Stalin ... ... And already after he said: - But all the same, the British are fools that they neglect the gun ...

... Stalin. Molotov and Voroshilov were very interested in my car "BB" ("Yak-2") and everyone asked how it was possible with the same engines and the same bomb

load, as in "SB", get a speed exceeding the speed of "SB". ***(With “the same bomb load as that of the SB,” Yakovlev’s plane could not even get off the ground.*** - M.S.) I explained that it’s all about aerodynamics, that the SB was designed 5 years

ago , and science has advanced a lot during this time ... Stalin kept walking around the office, wondering and saying: - Miracles, just miracles, this is a revolution in aviation. It was decided to

launch the "BB" in serial

production…

So, in a creative discussion with people's commissars and a young, but early "consultant", Stalin found one simple (many complex ones simply could not fit in the mind of a person overloaded with a million cases and worries) criterion for evaluating a combat aircraft. The criterion was SPEED. And this can still be considered our common luck. Speed is good. A bad plane won't fly fast. It’s scary to think what you would have to fight on if there was a young careerist next to Stalin pushing, for example, the project of some high-altitude “stratoplane” with round windows, like on an underwater bathyscaphe ... From the moment Stalin decided that everything was complicated and the interconnected complex of flight and tactical characteristics of a combat aircraft is reduced to a single figure - maximum speed, this opinion, hasty and incompetent,

has become an indispensable requirement for everyone. On January 25, 1940, after the change of leadership of the NKAP, a special Decree of the Council of People's Commissars of the USSR and the Central Committee of the All-Union Communist Party of Bolsheviks was adopted, dedicated to the situation in the aviation industry. In particular, it set the following tasks:

a) Serial Mass

production in 1940: for fighters - 575–600 km/h, for bombers - at least 500 km/h ***(no other technical parameters were even mentioned!*** - M.S.). b) experienced

Resolutely improve the organization of experimental work to find ways to maximize speed.

c) R&D

Over the next 2-4 months, reorganize the work of research institutes TsAGI, CIAM, VIAM in the direction of concentrating their attention on solving the most important problems of modern aircraft construction in accordance with the requirement of high speeds.

(105)

In the light of such "requirements of the party and government," the I-200 fighter project became "doomed to success." Still, the speed is 670 km / h (with turbochargers and all 717). True, the height (11600 m), at which it was only possible (theoretically, with turbochargers that do not exist in the "metal") to develop such a speed, was so high that not a single enemy aircraft could be found on it, but who think about it? Judging by the memoirs of Yakovlev, Shakhurin and others, judging by the decisions made, no one even explained to Stalin that the maximum speed at high altitude and the speed near the ground are two different speeds. Evaluation of a combat aircraft according to one single parameter (no matter which one) made it basically

impossible for a competently and conscientiously developed project to win in the “competition for the Stalin Prize”. The reader, who was not too lazy to go through a short "educational program" in Part 1, should understand this without lengthy comments. In particular, in conditions where the maximum speed became such a criterion, aircraft with an air-cooled engine turned out to be completely “impassable” (significantly greater combat survivability, simplicity and ease of maintenance in winter in the field, but greater resistance of the “lobed” motor). Shakhurin writes in his memoirs:

... before the war, they were overly carried away by water-cooled engines, since such an engine gave less drag ... it turned out that almost

> all fighters that were tested in 1940 (more than 10 types), and even some bombers had water-cooled engines. It turned out to be a clear miscalculation, although **it was difficult to convince the designers at that time *(highlighted by the author).*** After all, everyone expected that it was his plane that would be put into mass production ...

Shakhurin is a little confused. It is not difficult, but impossible, to convince the careerists, whose all thoughts were turned to pushing their plane at any cost. "Change the designers" and was not required. It was enough not to interfere with Polikarpov with the launch of his fighters with an air-cooled engine (I-180 and I-185) into a series. Finally, Shakhurin clearly forgot that the Perm Engine Plant No. 19 (which was part of the NKAP, that is, subordinate to him, Shakhurin), the main manufacturer of air-cooled stars, was being transferred to the production of liquid-cooled engines. The plan for the production of aircraft engines for 1941 (Resolution of the Council of People's Commissars No. 2466 of December 7, 1940) provided for the production of 20 thousand M-105, 8 thousand AM-35 and not a single powerful two-row "star" (M-71, M-82), under which Polikarpov designed the I-185 fighter. And this despite the fact that in the fall of 1940, the Shvetsov M-82 engine (hereinafter - ASh-82) successfully passed bench state tests.

It was this engine (and its further injector version ASh-82FN) that made possible the serial production of La-5, La-7, Tu-2, as well as the post-war Il-12, Il-14, helicopter "Mi-4". This engine, without any exaggeration, "fateful" for our aviation, was put into production only thanks to the extraordinary courage of the designer Shvetsov and the First Secretary of the Perm (at that time - Molotov) Regional Committee of the All-Union Communist Party of Bolsheviks Gusarov. Taking a huge, deadly risk (the former management of the plant and the design bureau was arrested in 1938), they did not comply with the Decree of the Council of People's Commissars and the Central Committee, retained equipment and equipment for the production of air-cooled motors and achieved a personal meeting with Stalin in early May 1941. (100) As a result, on May 17, it was decided to launch the M-82 into mass productio

already lost, and according to the project of the I-185 fighter, the most powerful blow of all possible was dealt: no engine - no aircraft ...

Turning the maximum level flight speed into the only criterion for evaluating a fighter aircraft, of course, led to "obvious miscalculations." A fighter is a complex combat system, and its design cannot be reduced to achieving the maximum in any one characteristic. The characteristic itself (speed) was very important, and in an effort to please the tastes of the Owner, the designers were forced to switch to high specific loads on the wing, improve aerodynamics, develop automatic propeller pitch changers, which generally corresponded to the main path of aviation development. In a word, the development of fighter aviation was harmed, but not so great. But the absolutization of the same criterion (maximum speed), transferred to bomber aircraft, led to disastrous consequences. In the early 1940s, the task of "running away from a fighter" became more and more unfeasible, and the combat survivability of a bomber was ensured, first of all, by

fighter cover, as well as the correct tactics of use (choosing optimal heights, camouflage by clouds and night haze) and an all-round increase active and passive protection of the bomber aircraft itself. The correctness of just such an approach was confirmed already in the first months of the war. ***“Flights of bombers and attack aircraft under cover in all cases gave the most positive results in terms of bombing accuracy (in the words of the flight crew, “it was possible to work calmly”). With the correct interaction of bombers with fighters, there were no losses from the air enemy, and only in two cases did the bombers, remaining without cover, suffer losses.*** So the navigator of the 12th BAD, Major Preobrazhensky, reported on September 16, 1941.

It is worth noting that the general direction of the development of attack aircraft has remained the same to this day - the technical improvement of bombers and attack aircraft is

a great variety of parameters (sighting and navigation equipment, flight range and altitude, active and passive protection, automation and redundancy of control systems, convenience for the crew), but not in the direction of increasing speeds. Modern "battlefield aircraft" (American "A-10", Soviet "Su-25") fly at a speed three times less than the maximum speed of modern fighters. And this does not surprise anyone, does not horrify, and it does not occur to anyone to call the Su-25 or A-10 "hopelessly outdated." And if they are already outdated, then by no means because of their "low speed" ... After this necessary remark, let's return to the story of the Yakovlev

aircraft ("BB", also known as "product 22", "Yak-2"). The conversation in Stalin's office did not end with a mere statement of the fact that the young designer had accomplished a "miracle" and a "revolution in aviation." There was something else that was tangible. Here is how the “magician” himself writes about this in his memoirs:

“Voroshilov wrote something on a piece of paper and showed it to Stalin, who, having read it, nodded his head in agreement. Then Voroshilov read the text of a petition to the Presidium of the Supreme Soviet of the USSR to award me the Order of Lenin, a ZIS car and a prize of 100,000 rubles. The petition was immediately signed by all three ... "

And here some explanation is needed. What is it - one hundred thousand rubles in 1939? We can say that these are 20 (twenty) brand new "emoks" (passenger car "M-1"). And you can (and in this context even better) say that this is 100 (one hundred) downed enemy aircraft. Yes, exactly one thousand rubles will be determined as a bonus to a fighter pilot for one downed enemy aircraft by order of the People's Commissar of Defense I.V. Stalin No. 0299 of August 19, 1941. At such prices, no one would have been able to earn 100 thousand. And for half of the modest gift that Yakovlev got (not counting the ZIS, mind you), only five or six pilots of the Soviet Air Force could claim (our Western allies did not have such - who shot down 50 or more German aircraft - did not have a single one). Alas, in this case,

Comrade Stalin made a mistake. That is, for the "revolution in aviation" it would be worth paying more - but only after the successful combat use of the next "miracle weapon", and not before the start of state tests of a prototype. "Product 22" represented

is a light (5 tons takeoff weight) twin-engine aircraft of very small dimensions (fuselage length 9.34 m versus 12.27 m for the SB bomber), which has neither bombs nor small arms, without a radio station, armor protection, intercom, etc. During tests in the spring of 1939, a speed of 560-570 km / h was achieved. This speed, equal to the speed of the best fighters of its time and 120-130 km / h greater than the speed of the serial SB bomber, delighted Stalin. Not limited to generous gifts for the “youngest technician” Yakovlev, Stalin on June 20, 1939 (without waiting for the completion of state tests that began on May 29 at the Air Force Research Institute) decided to launch the BB-22 into mass production. And not just anywhere, but at aircraft factory No. 1. (111) “Our business is to crow, and there - at least don’t dawn ...” A.S. Yakovlev perfectly

mastered this formula of relationships within the bureaucratic system. By the way, he knew how to crow masterfully. CM. Alekseev, Lavochkin's deputy aircraft designer, cites the following episode in his memoirs:

> ... a few months after the start of the war, the chief engineer of the Air Force, reporting on the state of affairs at the front, noted that the LaGG-3 distinguished itself by its survivability. Stalin
>
> interrupted the report and asked: - Comrade Lavochkin, how did you
>
> manage to make such a tenacious
>
> aircraft? Semyon Alekseevich got up and said: - Yes, we didn’t do anything special, it happened just like that ***(the answer is not only modest, but also absolutely accurate. There was nothing “such” in the sense of increasing survivability on the LaGG. Chief Engineer of the Air Force, probably , did not have accurate information, especially since "a few months after the start of the war" the***
>
> ***first "LaGGs" had just appeared at the***
>
> ***front. -*** M.S.) The meeting ended, Shakhurin came up: - Oh, you, hat you. You had such a chance to prove yourself ...
> If Stalin had asked Yakovlev such a question, he would have told for half a

After the Order of Lenin, the Stalin Prize, the black representative "ZIS" and the best aircraft factory in the country were received, Yakovlev tried to turn the "BB-22" into a full-fledged bomber. It soon became clear that this was completely impossible. A tiny bomb bay, inscribed in the space between the spars of the center section, contained exactly 2 (two) bombs "FAB-50" or two "FAB-100". Even the I-16 single-engine fighter flew with such a "bomb load". The placement of bombs in an additional compartment behind the rear spar led to a loss of stability (rear centering is unacceptable). With an additional external suspension of 4 more FAB-50s and the installation of at least minimal defensive weapons (one fixed upper machine-gun turret with limited firing angles), the speed of this “miracle” dropped to 445 km / h. The serial “SB” also flew at about the same speed, but it really flew, and on the “BB-22” the radiators narrowed to achieve the “record speed” boiled, the brakes burned during landing, and the tires of the superminiature wheels of the landing gear had to be changed after 5-6 landings . (111)

In hindsight, Yakovlev came up with an excuse for himself, which he placed on the pages of his memoirs published in gigantic editions. Stupid generals, it turns out, did not understand his innovative plan. He allegedly designed a high-speed reconnaissance aircraft, and the military insisted on turning the "BB" into a bomber, from which all the troubles began. Strange logic. Not to mention the fact that the Yak-2 was also unsuitable as a reconnaissance aircraft (exceptionally poor visibility from the navigator’s cockpit, limited range, low combat survivability), Yakovlev should remember that he “drunk” an empty aircraft of unknown purpose to the Owner as a full-fledged bomber, comparable in bomb load to the "SB"! For this, the order was received ... After a year and a half of continuous

improvements, after the installation of M-105 engines of greater power, a complete replacement of the cooling system, it was possible to bring the aircraft, called the Yak-4, to the point that it flew and did not boil at maximum speed 533 km/h. True, the Ar-2 flew with the same engines, although a little slower.

(515 versus 533), but it had three times the bomb load, steadily dived, had one and a half times the flight range, had a third crew member (gunner) and a third firing point to protect against fighter attacks from behind and below. In short, the "Ar-2" was a full-fledged, proven combat vehicle, and the "Yak-4" ... Leading engineer of the Air Force Research Institute A.T. Stepanets recalls how at the end of July 1941 he had to meet with front-line pilots who fought for several weeks on the Yak-4.

> How did you adopt such an unfinished aircraft? Pilots and navigators surrounded me indignantly. I feel a little more - and they will beat. What saved me was that I managed to explain: I am the chief engineer for testing Yakovlev fighters and have nothing to do with the Yak-4 ...

(111)

There was nothing to blame for the Air Force Research Institute. Despite the enormous pressure "from above" (the young technician became in January 1940 the deputy people's commissar of the aviation industry and held out for several more years as the personal consultant of the Boss), the head of the Air Force Research Institute A.I. Filin (remember, dear reader, this last name) in a report on the state tests of the Yak-2 / Yak-4, which took place in December 1940, directly wrote that " ***aircraft in the tested form are not reliable and combat-ready."***

And although the December plan for the production of aircraft in 1941 provided for the production of 1,300 Yak-4s, on February 12, 1941, the decision was finally made to stop the production of the Yakovlev "underbomber". A total of 111 Yak-2s and 90 Yak-4s were assembled. (111) Yakovlev modestly remarks in his memoirs: "almost 600 aircraft were produced." Ah, well done ... The funny thing is not that the academician and

colonel general in one person do not know how much 111 plus 90 will be. "brainchild", but only

cleared a place for the “product 100” born in the prison bowels of the NKVD OTB.

Yes, it's not a stipulation. "Product 100" - a high-altitude high-speed fighter - it was decided to turn it into a dive bomber. And although the only thing in common between these types of aircraft is that both of them fly through the air and land on the ground, in May 1940, an order was given to turn the “hundredth” into a bomber. The term is one and a half months. (26) And this is not a typo. Not a year and a half, but a month and a half. The reason for the haste is the same - the high estimated speed of the future bomber. The Sotka flew (especially in calculations, at high altitude, with turbochargers absent in nature) very quickly, and the authorities had hope that the bomber, created on the basis of the Weave, would be both diving and high-speed. Work boiled over. From the Ilyushin

Design Bureau, Arkhangelsk Design Bureau (and even from the Yakovlev Design Bureau), almost 300 people were allocated for the new project. Thus, the design bureau of the exposed "enemy of the people" Petlyakov, which does not yet explicitly exist, has become the country's largest design team! On June 23, 1940, the working drawings were ready. (26) The first flights of serial Pe-2 bombers began in November 1940. The great interest of the Owner in the new high-speed bomber, as well as the pressure of Beria, who stood behind the OTB, resulted in a rapid expansion of the production base. For the release of "Pe-2" they immediately loaded the "flagship number two" - the Moscow aircraft plant No. 22 (this is what "drew the line" under the Ar-2 program). Then Moscow plant No. 39 (previously Ilyushinsky) was connected to the production of Pe-2, and later - a huge new plant No. 124 in Kazan and Irkutsk plant No. 125. Before the start of the war, i.e., almost six months, managed to produce 458 "Pe-2" (including plant number 22 - 296 machines, plant number 39 - 157). In total, during the war years, 11427 Pe-2s were produced, which thus became the most massive Soviet bomber aircraft. Everything is relative. Of course, the Pe-2 looked great against the backdrop

of Yakovlevsky's "miracle aircraft". Solidly made, all-metal, very technological (simple and rational shell design of the fuselage with a minimum

reinforcing elements), very durable (inherited from the progenitor-fighter "Pe-2" received a glider capable of 12-fold overload), very tenacious to armor withstand (protected tanks pressurized with inert gas, protection of the pilot and navigator), the aircraft could cause admiration not only with Stalin, but also with real aviation specialists.

"Pe-2"

Yes, the practice of combat use of the "Pe-2" also revealed numerous shortcomings: high (for poorly trained young pilots of the wartime) landing speed, numerous cases of spontaneous combustion of the aircraft in the air (this was the "fee" for the electrical remote control of many units - motors and relays sparked and set fire to gasoline vapors), insufficient longitudinal stability (especially in full load takeoff mode). (105) All this can hardly be blamed on the creators of the “hundred” and “Pe-2” (Tupolev, Petlyakov, Putilov), taking into account the extreme and humiliating conditions in which they were forced to defend the “right to life” for his car (unfortunately, the life of V.M. Petlyakov himself turned out to be very short - on January 12, 1942, the Pe-2, on which he flew to Moscow, crashed ...). But was this plane a bomber, let alone a dive bomber?

A high-speed high-altitude fighter is not the best "preparation" for creating a dive bomber, that is, a low-altitude "battlefield aircraft". Yes, they immediately got rid of pressurized cabins that weighed down and complicated the design, it was even easier to get rid of turbochargers - they were not in

nature. But the very narrow (diameter 1.3 m) fuselage, in which there was geometrically no room for large-caliber bombs, remained. The heavy construction of the airframe also remained (the 12-fold “fighter” overload had to be supported by something), which, after installing everything that was needed for the bomber, also grew by 700 kg, leaving no conditional in the “existence equation” places" for the payload. The wing of a relatively small area remained, and the specific load (at normal, non-overload take-off weight) reached 186 kg/sq.m. Landing at field airfields became difficult and dangerous, especially for combatant pilots who were accustomed to the SB bomber with its low landing speed and short takeoff run. The result was an aircraft with a normal bomb load of 600 kg, the maximum

(with external suspension of bombs under the wing) - 1000 kg. This roughly corresponds to the capabilities of the single-engine Junkers-87, or the American single-engine single-seat fighter Kittyhawk. The Pe-2 combat use statistics show that the average load was just over 500 kg, and the aircraft (at least in 1941-1942) was used practically as a light "horizontal" bomber (only external bombs could be dropped in a dive). pendants, but they, as a rule, were not taken). The dimensions of the narrow fuselage bomb bay made it possible to take only bombs with a caliber of up to 100 kg (while the "outdated" Ar-2 could take a total of three FAB-500s and drop them in a dive). In short, it turned out to be a "semi-bomber" with a very modest weight and range of bomb load, inferior in all respects to the "Ar-2". For all but one - speed. "Pe-2" (without external suspension) flew 40 km / h faster than "Ar-2" in the entire range of altitudes. It was these 40 km / h that were recognized as the decisive argument. In fact, by demanding to turn the “hundredth” into a

bomber, the bosses hoped to get higher speed characteristics, but they just didn’t think that the bomber, “bristling” with gun turrets, hatches, bomb racks, would not be able to maintain the high speed of the original fighter progenitor. It is noteworthy that the

modern researchers (114) computer simulation of combat use (taking into account the opposition of enemy fighters, mind you!) front-line bombers of the early 40s (Pe-2, Ar-2, Yak-4, ANT-58) , "Junkers-88") showed that the "Ar-2" was superior to the "pawn" by 30-40% in solving any problems. The best of all - including the best of the "Junkers" - was, of course, the Tupolev "ANT-58" ("product 103"). But the history of this bomber, far ahead of its time, remains a mystery to this day. We will try to identify some possible "guesses" in the following chapters.

Chapter 16

At the beginning of 1940, the entire Soviet aviation industry, the entire huge system of large and small factories, prison and conditionally free design bureaus, training grounds and research institutes, was buzzing like a disturbed beehive. The owner could ascertain commendable diligence and agility in everything. He himself also contributed to the creation and maintenance of an atmosphere of general excitement.

On January 9-11, 1940, Stalin replaced the leaders of the people's commissariat, and this was done in such a hurry, as if there was the last day before the end of the world, which it was decided to spend on strengthening the leadership of the NKAP.

Shakhurin (who at the time of his appointment as People's Commissar worked as the First Secretary of the Regional Committee in Gorky, and a year before that he worked as the First Secretary of the Regional Committee in Yaroslavl) writes:

> ... In the first days of January, they called from the Central Committee. I was asked one question: "Comrade Shakhurin,
> can you leave for Moscow today?" I replied that a session of the regional
> Soviet of Working People's Deputies was underway, I was chairing it, it would last all of today, and possibly tomorrow
>
> day.
> “Then, Comrade Shakhurin,” they told me, “explain to your comrades that you are urgently summoned to the Central Committee. Is it possible to leave immediately? The train leaves in two hours.
> - Then leave ... ... I realized that the
> issue of my appointment
> was resolved. Stalin asked me: "How old are you?" “Thirty-five,” I replied.

> “Well, you see,” he threw to Yakovlev, “what a young people's commissar you have. This is good. …The
>
> conversation came to an end. I asked permission to go to Gorky to hand over the cases. Stalin a little
> hesitated, and then said: -
>
> Cases need to be transferred in Moscow. The work that awaits you is urgent. Anyone who needs to be invited here. And we will send a representative of the Central Committee to Gorky, who will report to the regional committee on the decision taken ...

Just as young (33 years old) was the Deputy People's Commissar for Experimental Aircraft Building and Science A.S. Yakovlev. Semi-literate M.M. Stalin expelled Kaganovich with a bang, seeing him off (in Yakovlev's retelling) with the following words: ***“What kind of people's commissar is he? What does he understand about aviation? How many years he has been living in Russia, but he has not learned how to speak Russian properly!*** Gold words. Of course, no one (regardless of the ability to speak Russian) asked Stalin about who and why two years ago appointed an ignorant upstart to lead the entire defense industry of the country. Is it possible that in 1937 M.M. understood all areas of military production better than "only" in one aircraft industry in 1940? By the way, M.M. shot himself. much later - after being removed from the post of people's commissar, he was given "for feeding and honor" not the worst, huge and new, aircraft factory No. 124 in Kazan. Clouds around M.M. Kaganovich began to thicken in the early summer of 1941, when a massacre of the leaders of the Air Force and the military industry began in the country. According to one version, L.M. Kaganovich warned his brother about the imminent arrest, after which M.M. shot himself (it happened presumably in early July 1941). But let's return from the black summer of the 41st to the bright May of the 40th. The general mood "at the top" was "perestroika", painfully familiar to you, dear reader. That is, indiscriminate swearing at recent idols and rosy dreams that after the change of

nameplates in the offices, the process will go on. With acceleration. From the minutes of the meeting of the Commission of the Chief Military

Council of the Red Army of May 4, 1940.

Shaposhnikov: Designers don't work well... Designers must carefully process drawings and use their brains more.

Voroshilov: The government took all measures to interest the designers. They were paid 1.5 million rubles for each car, i.e. 1.5 times more than it costs
airplane.

Pavlov: If we pay so much to designers, then we won't have cars. Other methods need to be applied
tougher.

Mehlis: But the designers still got fat. Pavlov: They
didn't get sick ***(as in the text. - M.S.)*** of the designer, but sabotage. Shakhurin: Polikarpov,
Arkhangelsky and Ilyushin were over-praised. Between individual designers and pilots there was a spike, which prevented the aircraft industry from moving forward. Pavlov: How long did M. Kaganovich deceive Comrade Stalin about
motors? I'm afraid that even now some comrades will not do this. Kulik: We follow the designers, what they give us, we take, and we must demand what we need ... Every
designer is a feudal lord, he does what he wants. They have millions on the current account, and work

do not want.

Voroshilov: All aviation management has been changed. New people have been appointed. The old ways of working are condemned. New people get to work well. With the help of the Central Committee of the All-Union Communist Party of Bolsheviks and Comrade Stalin, everyone was put on their feet ... We now have more cars than we need, and they cost at the level of the aircraft of the advanced capitalist countries. The problem now is to choose the best sample and put it into production. All this has been created, it is the result of a great work of the team. Government, the Central Committee and Comrade Stalin personally...

There really were "more than necessary" cars. In 1940, 45 aircraft were at the design and initial testing stage, and 13 of them reached state tests. There were plenty to choose from. We have

already talked about one of the selected projects above. Stalin fell in love with the plane, which was later called the MiG-3, passionately and immediately. General Zakharov recalls:

> At a meeting held at the beginning of the forty-first year, Stalin spoke a lot about this fighter, about the need to master it as quickly as possible. — I can't teach pilots to
>
> fly these machines. You are my helpers. You must teach pilots. Love this car! It sounded like a personal request...

MiG-3

The production capacities of the country's largest aircraft plant (No. 1) were entirely given over to the MiG production program. The pace with which the new car went into production was unprecedented even for that crazy era. At the

beginning of December 1939, the I-200 project, together with the developers, was presented to the newborn Mikoyan Design Bureau, on December 25, 1939, the Air Force Commission reviewed and approved the aircraft layout, by February 10, 1940, working drawings were made, on March 4, 1940, the Decrees of the Council of People's Commissars were issued on the construction of three prototypes of the I-200 fighter. Finally, on April 5, the oldest test pilot A.N. Yekatov (graduated from the Moscow Aviation School in 1916, 24 years of flying experience) raised the car for the first flight. The actual flight parameters were, of course, lower than expe

but still exceptionally high. Even with the AM-35 engine (there was no 37th engine yet), the aircraft developed a maximum speed of 628 km / h at an altitude of 7 km (in one of the flights a speed of 651 km / h was achieved) and 579 km / h at an altitude of 2.2 km. The plane gained a height of 5 km in 5.1 minutes. (94) In all of the above parameters, the I-200 was superior to the Messerschmitt of the F series, which was being tested at the same time. It is worth noting that the I-200 tests were successful and, which is quite unusual, bloodless. Before the end of factory tests (August 25, 1940), the first copy of the I-200 completed 109 sorties with a total flying time of 40 hours 49 minutes without any significant accidents and loss of life. On September 13, 1940, at a meeting of the technical council of the Air Force Research Institute, it was noted that "The I-200 is the most advanced aircraft when it enters state tests." (94) The future of the fighter, renamed from "I-200" to "MiG", was not in doubt - the aircraft became the main product of the plant number 1, and the production plan for 1941 provided for the production of 3600 "MiGs".

It can be assumed that the mood of Comrade Yakovlev at that moment was not so rosy. The appointment to the post of Deputy People's Commissar did not add anything significant to his actual status of "a person close to the person of the Boss", but added a lot of trouble and completely unnecessary personal responsibility (and in this sense there is no reason not to believe Yakovlev that he resisted as soon as he could " high appointment"). The ill-fated "BB-22" from plant No. 1 was taken out and sent to be "brought to mind" to a low-power plant No. 81 in Tushino. All the intricacies of intrigue against Polikarpov ended only with the fact that the next Polikarpov fighter (I-200), however, under the name MiG, again occupied the production facilities of the country's largest plant. The second largest fighter manufacturer, the Gorky Aircraft Plant No. 21, has so far successfully sabotaged the launch of the Polikarpov I-180, but Yakovlev himself did not personally receive anything from this. Conclusion? It was necessary urgently, "at any cost", to speed up the testing of our own I-26 fighter. So far, "the train has not finally left."

As the reader, of course, has already noticed, the author is very partial to Comrade Yakovlev personally and to his role in the development of Soviet military aviation. Therefore, we will replace the author's assessments with a lengthy quotation from a monograph dedicated to the fighters of the Yak-1/7/9 family.

> "I-26" was designed in just five months. One day before the end of 1939, the graceful red monoplane was transported to Khodynka for factory testing ... The "record" time for designing the fighter immediately made itself felt. There were more than enough defects, blunders, inconsistencies. The main thing is that the strength of the aircraft turned out to be insufficient (67% of the breaking load) ... The chassis design turned out to be extremely unsuccessful. At speeds above 220 km / h, the landing gear was not retracted, when cleaning the wheels, they hit the wing skin with force ... The locks were unreliable, there was a constant danger of unintentional retraction or landing gear ... The tests of the I-26 were interrupted by tragedy - April 27, 1940. Yulian Ivanovich Piontkovsky, the chief pilot of the Yakovlev company, crashed on it. Establish the exact cause of the disaster. Probably, the landing gear spontaneously came out, the wheels began to sway and strike the wing. According to another version, the wing of the plane fell off due to insufficient strength ...
>
> Not managed.

It is very likely that if Yakovlev had not been the deputy commissar of the aviation industry, the history of the fighter would have ended with factory tests. What is the fact that in his 42 flights Piontkovsky **15 times landed on an emergency landing *(hereinafter, it is emphasized by me.*** - M.S.), so the catastrophe is a completely natural result. However, Yakovlev managed to convince Stalin of the prospects of his offspring ... The Air Force Research Institute agreed to accept the I-26 for testing only because of unprecedented pressure from above. In the act of acceptance for state tests dated June 1, 1940, a whole “bouquet” of inconsistencies of the aircraft with the requirements of the terms of reference and **strength standards was noted.**

> The testers were given a difficult task ... Climbing was carried out with maintaining horizontal platforms every two to three minutes ***(clarification is needed here: imagine that marathon running is replaced by a daily run of 100 meters a day, and after a year and a half it will be "gained" the total length of the marathon distance, the running time of all the "hundred meters" add up and the runner is declared the world record holder.*** - M.S.), the maximum speed measurements were carried out for three minutes instead of six. The reasons for such, so to speak, "tests" were engine overheating and insufficient strength ...
>
> According to the results of the Air Force Research Institute, it concluded that the I-26 fighter **did not pass the state tests,** and the defective statement for the car consisted of 123 points ... Formally, the I-26 "did not finish" the tests, that is, a number of flights were not carried out. However, everyone was well aware of what would happen to the machine and the pilot in the event of aerobatics or diving at high speeds.
>
> ***(17)***

Comments, as they say in such cases, are superfluous, but one clarification should be given, not of a technical, but of a human nature. Yu.I. Piontkovsky tested, and at his own peril and risk, even the very first planes of an unknown student Yakovlev. Piontkovsky was next to the designer for more than 10 years, was older than him by years, and to a large extent it was he who helped Yakovlev become what he became. In Yakovlev's book (86) there is not a word, not a half-word about the plane that fell apart in the air and the death of Piontkovsky. There was a man - and there was not ...

Returning from a man to an aircraft that received the name Yak-1 in December 1940, some undoubted advantages of the new fighter should be noted. ***"The opinion of combatant pilots practically coincided with the opinion of test pilots: especially***

noted ease of piloting and ease of development

fighter, complaints caused overheating of the engine, shortcomings

chassis design, lack of a radio station, generator, landing lights. (17) On the eve of the

Great War, a fighter aircraft that was easy to fly and accessible to an inexperienced pilot was very much needed by the Soviet Air Force. Moreover, the super-fast MiG turned out to be very difficult to pilot.

An outstanding Soviet pilot and commander, a veteran of the Spanish and all subsequent wars (he met the Great Patriotic War in the rank of Major General and the position of commander of the 43rd Fighter Division) G.N. Zakharov speaks very harshly about the MiG: ***“He did not forgive mistakes when piloting, he was designed for a good pilot. The average pilot on the MiG automatically passed into the category of the weak, and even the weak simply could not fly on it.*** (55) Yes, of course, other statements can be found. A.I. Pokryshkin, for example, writes about the MiG with enthusiasm (“at high altitude, the plane is God”), but a mass-produced aircraft for the largest aviation in the world could not be designed for the skills and abilities of Pokryshkin-level pilots. Alas, it remains to sigh fruitlessly once again that the Mikoyans did not consult with Polikarpov and stole the unfinished I-200 from him, instead of launching the magnificent I-185 under the name MiG, which combined and high speed, and powerful weapons (three ShVAK guns), and ease and simplicity in control ...

In terms of armament, the Yak, thanks to the installation of a cannon firing through the hollow propeller shaft, also outperformed the I-200 with its machine-gun (1 UBS + 2 ShKAS) weapons. In addition, the design of the "Yak" made it possible to increase the power of fire by installing a larger and larger caliber gun (by the end of the war, as you know, they reached 37 mm and even 45 mm). In a word, not only the presence of "administrative resources" can explain the hasty launch of the completely "raw" and still extremely dangerous for the pilot "Yak-1" into mass production (in May 1940, even before the start of state tests, which "I-26" so and could not successfully pass, it was decided to release it at once at three factories). However, these three "factories" (Nos. 301, 47, 292, they are also a furniture factory, repair shops and "Sarcombine"), taken together, did not cost one third of the Moscow aircraft giant No. 1.

A.S. Yakovlev understood this perfectly, so he started a cunning multi-way intrigue. This intrigue brings us back to the ancient Russian city on the Volga, which at that time was called Gorky. The management of plant number 21 until the autumn of 1940 stubbornly and successfully sabotaged all decisions of the party and government to deploy mass production of the I-180. While these amazing and incredible “undercover battles” were going on, the huge plant continued to “drive the plan” for the production of obsolete I-16s. In parentheses, we note that, contrary to the repeatedly replicated conjectures, Polikarpov not only did not try to continue the production of the outdated I-16 indefinitely, but also asked in writing (alas, to no avail) the leadership of the NKAP to stop the production of the "donkey" or, at least, leaving in the series, only the latest "type 29", free up the capacity of the 21st plant for the "I-180". In the fall of 1940, the People's Commissariat "suddenly" drew attention to the abnormal situation that had developed in Gorky, and proposed to transfer the production of MiG-3 fighters to plant No. 21. In such a roundabout way, Yakovlev tried to free up the production capacities of plant No. 1 for the production of his fighter.

But it was not there. The Mikoyans were the first to oppose such an idea, rightly judging that the 33-year-old deputy people's commissar "takes it out of rank." Said his weighty word and the director of the plant number 1 P.V. Dementiev, who did not smile at the prospect of another restructuring of the entire technological chain for the production of the Yak-1, the design of which (a welded truss covered with fabric) had little in common with the MiG. And the word of Dementyev, the head of the largest aircraft plant in the country, who also has “his own man at the top” (Dementyev was the chief engineer of the director of the 1st plant, Voronin, who became Shakhurin’s deputy in January 1940), was weighty. The project of transferring the production of MiGs to the Volga was buried in the bud.

And what about plant number 21? And nothing new. Yakovlev with his "I-26" ("Yak-1") was also not allowed into the plant. The children's fairy tale (“I left my grandfather, I left my grandmother, I will leave you too ...”) continued until the very end of 1940. Someone (something) saved the plant until ... Until the tests of the varnished "I-301" were completed with sin in half. So they launched him into a large series on

Gorky aircraft factory The repeatedly mentioned above December plan for the production of combat aircraft for 1941 provided for the production of 2960 "LaGG-3" (a thousand more than the "Yakov"). And this despite the fact that plant number 21 has not even begun to master the complex, extremely low-tech wooden structure of the LaGG. On

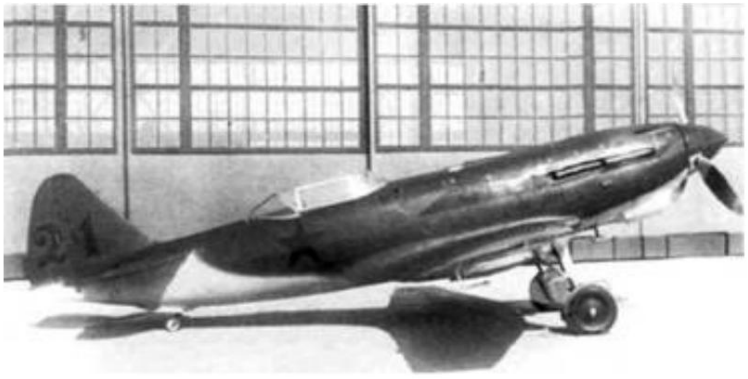
New Year's Eve, 1941, the first group of designers from the Lavochkin Design Bureau arrived in Gorky. They were instructed for a long time on the subject that the aircraft plant is a secret enterprise, and its “closed” number 21 is top-secret information at all, therefore, from the station to the plant, one must move silently, along a route learned by heart. In a December snowstorm in an unfamiliar city, everyone immediately got lost. Just then, a tram covered in snow up to the very roof drove up, and the conductor shouted: “Who should go to the 21st plant? Get in quick!" Of course, no one moved from their place - it's better to freeze than go

to a provocation ... But seriously, the author failed to find at least some logic in the events at the 21st plant. One can understand why he did not go into the I-180 series: Polikarpov was in disgrace, and the blunt-nosed fighters with an air-cooled engine were diligently discredited by someone in the eyes of the Boss. Everything is clear here. But there were also quite "sharp-nosed" contenders for the largest aircraft factory. The most natural, convenient for the technologies of this plant (and perhaps the best of the entire group of new fighters with an M-105 liquid-cooled engine) was Pashinin's I-21 fighter.

MM. Pashinin was one of the leading specialists of the Polikarpov Design Bureau, and during the described period - the head of the design bureau division engaged in design support for the serial production of "donkeys" at plant No. 21 (hence the name of Pashinin's fighter "I-21").

If the I-180 was a deep modernization of the I-16 by installing a new M-88 two-row air-cooled engine, then the I-21 fighter was a deep modernization of the same I-16 by installing a liquid-cooled engine M-105. Thanks to this design approach, 60-70% of the parts and assemblies of the new fighter were similar or directly identical to the I-16 parts, which, in turn,

turn, promised the possibility of rapid deployment of serial production of "I-21".



"I-21"

The main "highlight" of the "I-21" project was a wing with a special symmetrical, so-called "momentless" cross-sectional profile. The use of such a wing made it possible (in terms of strength) to develop tremendous speed in a dive - up to 950 km / h (although in reality, flying at such speeds already close to the speed of sound would be impossible due to the conditions for ensuring longitudinal stability). The very idea of achieving a high diving speed was absolutely relevant and corresponded to the general trend of the transition from combat maneuvering in turns to dynamic vertical maneuver. A rare feature of the I-21 in 1940 was the drop-shaped cockpit canopy, which provided all-round visibility. In a word, the plane was very, very outstanding. The I-21 made its first flight in July 1940. The aircraft turned out to be light (take-off weight 2670 kg, i.e. lighter than the Yak,

and even more so the LaGG), showed a speed of 573 km / h at an altitude of 5000 m and an unprecedented high rate of climb near the ground - 21 m / s. The first copy of the "I-21" crashed. In October, the second copy was built and began factory testing, and in April 1941, the third. There were many problems. Some of them were common to all new fighters born in 1940 - a frantic race with the start of flight tests and the extremely unsatisfactory performance of the still "raw" M-105 engine. Others (unacceptable landing speed of 165 km / h according to the Air Force requirements, insufficient stability in flight) were associated with the use of a new, little-studied wing profile. The plane, of course, required painstaking and lengthy refinement - but in

In this sense, it was no different from its competitors. The main thing was that in the case of the "I-21" there was something to refine, the output of the process could be a front-line fighter, in some aspects superior to both the Polikarpov "I-180" and the Yakovlevsky "I-26". Nevertheless, the tests of the Pashinin fighter were stopped at the beginning of 1941, and in January 1941, the LaGG-3, an initially stillborn, heavy wooden piano, went into production. Alas, someone liked

LaGG-3 very much. Later, three more aircraft factories were transferred to its production: the 23rd in Leningrad, the 31st in Taganrog (later evacuated to Tbilisi) and the 153rd in Novosibirsk. In the plan for the 1st quarter of 1942, LaGG completely “breaks out” into first place (1570 LaGGs against 785 Yak-1s). Apparently, they forgot to stop the production of LaGG-3 even after it was radically converted into La-5 in the spring of 1942 in Gorky. Plant No. 31 in Tbilisi continued to produce the “lacquered coffin”, already hopelessly outdated by that time, throughout 1943, and even in 1944 transferred another 432 “LaGGs” to the Air Force! How it was possible in the 44th year to fight on the "LaGG" against the "Messers" of the K series (an engine with an afterburner power of 2030 l / s.), Only the authorities knew.

Be that as it may, at the end of 1940, three “new types” fighters (“MiG”, “LaGG”, “Yak”) were already in mass production (or on the nearest approaches to it), and the Air Force command was already drawing up calendar plans rearmament of fighter regiments. Finita la comedy? No, the "comedy", but in fact - a tragedy with great loss of life, was just beginning. The attentive reader may remember that at the beginning of the 14th chapter we mentioned the festive dinner that took place at Stalin's dacha on November 7, 1940. So, at that very dinner, Comrade Stalin not only advised his associates to engage in self-education, not only reminded them that he might get angry. Comrade Stalin shared with those present the new knowledge that he had learned in the process of self-education:

> ... It turned out that our planes can only stay up to 35 minutes in the air, while German and English ones can stay in the air for several hours! Meanwhile, no one from the military department signaled about the aircraft. None of you have thought about it. I called our designers and asked them: is it possible to make our planes stay in the air longer? They answered: It is possible, but no one gave us such a task! And now this shortcoming is corrected ...

(105)

Where these figures came from is unknown. And it is completely incomprehensible - what kind of "German and British aircraft capable of staying in the air for several hours" are we talking about. The Soviet bomber "DB-3f" ("Il-4") had a greater flight range than the serial bombers of England and Germany in 1940, and "stayed in the air" for 10-12 hours. But, judging by the context, Comrade Stalin spoke about fighter planes. The German "Messerschmitt-109" and the English "Spitfire" had almost the same takeoff weight, almost the same volume of fuel tanks (400 and 386 liters, respectively) and could hold out in the air (when loitering at cruising speed, without combat maneuvering!) No more than 1, 5–2 hours. Almost all authors note that during the "Battle of Britain" the German "Messers", taking off from airfields in northern France, were forced to leave the battle after 20-25 minutes.

Even a very light (about one and a half times lighter than the Bf-109E) I-16 fighter had a maximum flight range of about 450 km, which gives at least 1.5 hours of barrage. Already in April 1939, work

began on the installation of external fuel tanks. Their first combat use was in the Finnish war. After many experiments, they settled on the design of a 93-liter fiber (cardboard) fuel tank. Two of these tanks were hung under the wings of the "donkey", increasing the duration of the patrol by another hour. At the beginning of 1940, they switched from experiments to serial production, and each

"I-16" was equipped with six (!) Hanging tanks. (32) As for the “new types” fighters, they all had a maximum flight range (without any external tanks) of the order of 600–700 km, i.e., they were in no way inferior in this respect to their Anglo-German competitors. In any case, there were no grounds for panic statements that the duration of the flight of Soviet fighters was several times shorter.

But even this is not the most

important thing. An extremely important and almost unexplored question is why, at the turn of the 1930s and 1940s, Comrade Stalin suddenly needed combat aircraft with an unusually long flight range. Even a cursory glance at a geographical map (or a school globe) is enough to notice the difference in the size of Germany and the USSR. It was Hitler who should have had a “headache” about which fighters would accompany the non-existent long-range bombers in raids on the Soviet aircraft engine plants in Rybinsk and Perm. Nevertheless, Hitler started the World War and fought for two years with bombers with a combat range of no more than 2700 km (He-111), a heavy (6740 kg) twin-engine fighter Messerschmitt-110 with a maximum range of 909 km and the main front-line fighter "Messerschmitt-109" with a range of less than 700 km.

For some reason, Stalin needed completely different numbers. Already having the DB-3f bomber in serial production and in service with combat units, capable of flying 3,300 km with a bomb load of 1 ton, in January 1939 (i.e., even before the start of the world war), he set the task of creating a bomber with a range 5000 km. In accordance with these requirements, the twin-engine bomber DB-240 (Er-2) was developed and put into mass production. Later, October 2, 1940. By a resolution of the

Council of People's Commissars and the Central Committee (and the order of the NKAP No. 521 issued on its basis), it was decided to increase the flight range of all fighters introduced into mass production. For twin-engine escort fighters - at least 2000 km, and even for single-engine vehicles a range of 1000 km was set. Moreover, these

the range had to be ensured without the use of hanging tanks! Until very

recently, Russian historians attributed these decisions to the category of inexplicable eccentricities of the generally sensible comrade Stalin. But the documents found in the archives (RGVA, RGAVMF, RGASPI) and first introduced into scientific circulation by A. Stepanov show that it is simply impossible to study the history of the so-called “pre-war period” without a globe. It turns out that already in April-May 1940, the command of the Air Force and Aviation of the Navy was actively developing plans for bombing Beirut and Haifa, Cyprus and Malta. Particular attention, of course, was riveted to the planning of the operation to bomb the Suez Canal, with the aim of ***"depriving England and the Mediterranean states of the possibility of normal operation of this communication."*** Moreover, the Soviet military attache in Berlin was given the task of requesting from the German allies all available information on the air bases of the Royal Air Force in the Mosul region ... The Decree of October 2 actually crossed out the enormous efforts to design a new generation of fighters. Even increasing the

range “simply” by installing external fuel tanks required a significant redesign (primarily strengthening the landing gear and wings) and would inevitably lead to a decrease in all flight characteristics due to the increased aerodynamic drag and aircraft weight. It is impossible to deceive the law of nature, expressed in the "equation of existence". The addition of 200-300 kg of fuel (while maintaining the original thrust-to-weight ratio and specific wing load) would lead to an increase in take-off weight by at least one ton, which would require the use (in fact, development) of an engine with a unit power of about 1500 hp. But Comrade Stalin wanted to put all the extra fuel inside the plane! This created an almost hopeless situation. There is a lot of free space in a single-engine fighter. The question is, where is it? The tail section of the fuselage is empty, like a drum, but placing an additional mass of fuel there will lead to a shift in the center of mass back, reducing, and in the worst case, complete

loss of longitudinal stability. Loss of longitudinal stability is an immediate exit to supercritical angles of attack and the aircraft stalls into a tailspin. This option is not suitable, but it was he who was implemented on the MiG. According to the memoirs of one of the developers of the "I-200" N.Z. Matyuk, on one of the October days of 1940, the director of plant No. 1 Dementyev entered the design bureau hall.

> If you don't suggest how to bring the speed range of the I-200 up to 1000 km, then the car can be removed from mass production," Dementiev turned to us without further ado. When is this decision
>
> required? someone asked. "Tomorrow morning," the director replied. After that, Pyotr
>
> Vasilievich politely with everyone
>
> said goodbye and left...

Further, the author of the memoirs writes that "by ***the morning it was possible to "push" an unusually shaped gas tank into the fuselage under the cockpit by small movements of the water radiator and the units of the aircraft control system."*** Anyone who has seen a plane at least once in a section should understand how many changes need to be made to hundreds and even thousands of drawings in order to realize a "small movement of the radiator" in metal, to push a 250-liter gas tank under and behind the pilot's seat, etc. e. To restore the broken alignment, the motor had to be moved forward by 100 mm, and all this was done in a fantastically short time.

As a result, the weight of the fighter (the variant with an additional gas tank was called the "MiG-3") increased and reached 3355 kg, the rate of climb fell from a record (5 km in 5.1 minutes) to very mediocre (5 km in 6.5 minutes). Due to the increased load on the wing, the landing speed rose to 145 km / h (125 km / h for the Messer, 130 km / h for the I-16 of the latest types). The only "trump card" of the MiG was its high speed (495 km / h at the ground, 640 km / h at an altitude of 7 km), in this parameter it was not inferior yet, but at high altitude it surpassed the Messerschmitt of the latest modification F -2. It is not quite clear what the consequences of the violation of the initial alignment of the aircraft are. Tests at the Air Force Research Institute seemed to confirm

sufficient longitudinal stability of the MiG-3. On the other hand, it was after the installation of the rear gas tank that a long series of MiG disasters began due to a breakdown in a tailspin. However, this could also be due to the beginning of the development of the capricious MiG by pilots of combat units, who did not have such qualifications as the

testers of the Air Force Research Institute. Misfortune never comes alone. Began massive cases of engine failure AM-35A. The engine stalls both at high altitudes and at low altitudes - especially when trying to give a "sharp gas". Suffice it to say that during factory tests on three experimental I-200 aircraft, the failed AM-35A engines had to be changed 7 times. On March 12, 1941, test pilot A.N. died during the tests of the MiG-3. Ekatov (the one who first took the I-200 into the sky), and before him, in the same 1941, two more MiG testers died: Kuleshov and Afanasyev. A wave of catastrophes also swept through the combat units. Things got to the point that in the second half of March 1941, all flights of aircraft (serial and experimental) with AM-35A and AM-37 engines were

banned. The cause of the engine failure was the insufficient strength of the blower impeller and the unreliable design of the blower inlet guide vane control mechanism. The question of these ill-fated guide vanes was discussed at the level of the Politburo of the Central Committee - of course, because hundreds of the latest fighters froze like shot birds on military airfields. A group of designers in the truest sense of the word was locked up in the design bureau with orders to develop a new mechanical blade drive. Developed. We tried it. Happened. On an emergency basis, new mechanisms were sent to fighter regiments. Cases of engine shutdown during abrupt operation of the gas sector almost ceased, but the engine still worked extremely unreliably: it warmed up, “driven oil”, spark plugs had to be changed every 5-6 sorties ... And what about the 1000-km range? First of all, it should be noted that

the ill-fated Decree of the Council of People's Commissars of October 2 required such a range to be provided at a speed corresponding to 90% of the maximum. This is a very important clarification, since the most advantageous

in terms of fuel consumption, the speed was less and for an aircraft of that era was about 65–80% of the maximum.

Let's explain this with a concrete example. Tests of the serial MiG-3, carried out after the start of the war, showed that the duration of the flight at a speed of 90% of the maximum was 1 hour 10 minutes, and at the optimal fuel consumption altitude and speed - 2 hours 11 minutes. There is not the slightest doubt that both the "round" figure of 1000 km and the equally "round" 90% came to Stalin's head without any reasonable, technical or tactical justification. Desperate attempts to get a speed range of 1000 km on the MiG continued throughout February, March, and April. With a maximum load of 470 kg of fuel, this was sometimes possible. More often than not. Between the leadership of the NKAP and the military testers from the Air Force Research Institute, conflicts began, mutual reproaches for the wrong method of testing, improper operation of the engine, etc. In the atmosphere of general hysteria created under the leadership of the party and personally Comrade Stalin, the term "wrong" was easily replaced by the word "wrecking". This time, the consequences were incredibly devastating, but more on that later. Design Bureau Lavochkin went the other way. Additional fuel

tanks placed in the wing.

This made it possible to maintain the original centering and longitudinal stability. However, the "LaGG" was already prone to a tailspin (moreover, a sudden stall), and with a reduced stability margin, it simply would not be able to fly. The increase in the already excessive take-off weight, the lack of “furniture” polishing, combined with the manufacturing defects inevitable during ultra-high-speed launch into mass production, led to the fact that the maximum speed of the serial LaGG-3 dropped to 549 km / h. But this is not the main result of the struggle for range. Wing tanks are a significant

increase in the area of aircraft vulnerable areas. It is no coincidence that N.N. Polikarpov and V. Messerschmitt made their fighters with one gas tank in the fuselage. One, even a large tank, had a much smaller area of destruction, and it was easier to cover it with something (armor or engine). As a result, on top of all the shortcomings

“LaGGa”, it also turned into what the American pilots called “one shoot lighter” (this can be translated as “failsafe lighter”). However, in this it differed little from the Yakovlev fighter, in which all the fuel was placed in four wing tanks. Protecting gas tanks to some extent mitigated the problem of the vulnerability of wing tanks, but no protector could close a hole of 200-300 mm formed by a 20-mm shell of an enemy air gun ...

How did the Yakovlev Design Bureau solve the problem of "distant wanderings"? But no way. Deputy People's Commissar Yakovlev simply ignored the order of the NKAP No. 521. There were no improvements (i.e., no damage) to the I-26 fighter (the future Yak-1) to increase the range to 1000 km, and all tests and measurements of flight characteristics produced with a fuel weight of 305 kg. Up to their withdrawal from production in 1944, the Yak-1 and Yak-7 aircraft were produced - and successfully accepted by military acceptance - with a flight range of 650 km. The fact is very interesting, forcing us to take a fresh look at the origin of Order No. 521 itself ...

As for the long-range bomber "Er-2", the whole ridiculous history of its development can serve as an example of the wisdom of the folk saying: ***"To be born quickly, then to be born stupidly."*** The beginning of the story was extremely typical for that era. The chief designer (Italian aristocrat R. Bartini, who of his own free will came to help the country of the "victorious proletariat") was arrested and works in the OTB "sharashka". The design bureau is headed by a young party organizer of the enterprise, a graduate of the Mechanics and Mathematics Department of Moscow State University V. Ermolaev. The aircraft was designed and built in an incredibly short time: on July 29, 1939, the terms of reference were approved by the Decree of the Defense Committee under the Council of People's Commissars of the USSR No. 227, and already on May 14, 1940, the first flight of the new bomber took place! On October 17, 1940, state tests were completed at the Air Force Research Institute, as a result of which it was established that not a single requirement of the terms of reference was met. Nevertheless, the Er-2 is being launched into mass production at aircraft plant No. 18 in Voronezh, whose team is quickly mastering a new (and very different in design from the DB-3f that was previously produced by plant No. 8) mac

"Er-2"

Further - more. On April 12, 1941, the people's commissar of the aviation industry, Shakhurin, signed order No. 330, according to which the production of the "good old" DB-3f was stopped altogether, and it was proposed to concentrate all the plant's forces on the assembly of the Il-2 and ***Yer- 2"".*** True, a month after the issuance of this order, on May 16, 1941, Major General Zharov, head of armament orders for the Red Army Air Force, reported:

> On May 14, 1941, according to ground acceptance certificates, 13 Yer-2 aircraft were accepted by
>
> the military representative. Not a single aircraft can be sent to combat units at this time, since the factory is delaying their refinement. The difficulty in fine-tuning these machines is the exceptionally careless and hasty assembly of aircraft ...

(105)

In the end, after the start of the war, two air regiments were armed with Yer-2 aircraft: the 420th DBAP and the 421st DBAP. As of August 4, 1941, there were 32 aircraft in the 420th regiment, and 28 aircraft in the 421st, for a total of 60 brand new, only from the factory, bombers

"new type".

The first combat operation began on 10 August. By this time, in the 421st DBAP alone, there were 30 (thirty) cases of rupture of the landing gear hydraulic system. One aircraft, two days after entering the regiment, crashed along with the entire crew, going into a steep dive for an unknown reason. 6 aircraft burned in the air due to spontaneous combustion of engines. All the rest would have burned down if the urgently created commissions had not revealed the following picture:

- the connector of the supply pipeline of the gasoline system is located next to the exhaust manifold of the engine (design flaw); - the connector itself was assembled at factory No.

18 (and this is one of the four most powerful factories in the country!) So that gasoline does not even leak from it, but spurts out (factory marriage); - in addition, a wrench flew over the supercharger of one

of the motors

key.

On August 10, 28 combat-ready Yer-2s flew to the Pushkino airfield near Leningrad to participate in the most important operation, which was personally led by the commander-in-chief of the Air Force Zhigarev, to carry out a massive raid on Berlin. After a strict "input control" of the technical condition of the aircraft, only 16 Yer-2s were recognized as serviceable. Out of 28, although it would be more correct to say - out of 60 delivered from the factory in terms of DBA. The evaluation of the Yerov by the pilots can be judged from the report of the commissar of the 420th DBAP, senior political instructor Dokalenko: ***“... The flight crew expresses a certain mood regarding the reliability of the materiel. Pilots and navigators say that it would be good to transfer them to another type of aviation ... " (36)*** Soon, the leadership of the Air Force lost interest in the ultra-long bomber. The Ermolaev Design Bureau is

transferred from factory to factory, they try to “bring it to perfection” for four years in a row, changing one type of engine after another (two M-105s, of course, were absolutely insufficient for an aircraft whose weight was twice the weight of the Ar-2 ” or “Pe-2”, all other engines worked extremely unreliably). During one of these transfers-flights V.G. Ermolaev fell ill with pneumonia and died untimely on December 31, 1944. By the end of the war, after getting acquainted with the American bombers, work on the Yer-2 was stopped. During the entire war, about two hundred Yer-2s were transferred to combat units of long-range aviation. This aircraft did not play any significant role in the war. The main thing that remained of it for many years is the beautiful, openwork steel trusses of the center section. The authorities of the city of Irkutsk used them on the fence of the Palace of Culture of the same plant, where hungry workers cooked these ill-fated farms for 12 hours a shift ...

In pursuit of an unheard-of range (twice, by the way, twice the distance from Minsk to Berlin and back), "SNK and the Central Committee" in the person of Comrade Stalin did not immediately notice the magnificent Tupolev front-line bomber ("ANT-58", "product 103"). When they came to their senses, all the main aircraft factories capable of mass production of a twin-engine all-metal aircraft were already busy. What are busy? They are engaged in the production of the "semi-bomber" "Pe-2" (Moscow plants No. 22 and 39, Kazan No. 124) and the "distant" stillborn "Er-2" (Voronezh plant No. 18). Nevertheless - and this is very important to note - the decision to launch the 103rd into mass production was nevertheless made. On June 17, 1941, the order of the NKAP No. 533 was issued signed by Shakhurin:

> In pursuance of the government decree ... the director of plant No. 18, Comrade Shenkman, immediately begin preparations for putting the 103 aircraft into production.
>
> ... To the director of plant No. 156 Comrade. Lyapidevsky, together with the head of the NKVD OTB comrade Kravchenko, develop serial drawings for transfer to plant No. 18 in the period from August 15 to September 15, 1941 ... send to plant No. 18 no later than October 15, 1941 a group of specialists from the NKVD OTB in the amount of 20–25 a man led by Comrade Tupolev ...

It is noteworthy that in order No. 533, next to the name of the exposed and still in custody "enemy of the people" Tupolev is the appeal "comrade." Speaking seriously, this order posed a completely unsolvable task for Plant No. 18: to arrange the production of three (!!!) new aircraft at once, and very different in design. If the ANT-58 was, so to speak, an “ordinary” riveted duralumin aircraft, then the Er-2 design had a lot of welded steel components and assemblies, but the armored Il-2 was completely perfect. exclusive." No matter how gigantic the 18th plant was, it could not overpower three new machines at once. There should have been only one plane left.

Exactly five days after the decision was made to deploy the mass production of ANT-58, the war began. Five days later, it became quite clear that long-range raids on Haifa, Alexandria and Malta would have to wait. The Soviet Air Force faced completely different tasks, and there was no better front-line bomber than the ANT-58 in the world. It would seem that the choice is obvious. Nevertheless, the long-range Er-2 and the Il-2 attack aircraft were left at plant No. 18, but the ANT-58 (the future Tu-2), together with the design team, went to places not so remote. in the city of Omsk. On July 27, 1941, a decision was made by the State Defense

Committee, according to which the prison TsKB-29, Moscow aircraft factories No. 156 and 81 were evacuated to Omsk, to the production site of an unfinished car assembly plant. On this basis, a new aircraft plant No. 166 was to be created. This non-existent plant was supposed to (as soon as possible, of course) launch the production of the 103 (Tu-2) bomber. In fact, such a decision meant curtailing the program to create a new front-line bomber. A modern, rather complex, mechanized

design of a 10-ton twin-engine aircraft would be within the power of a powerful aircraft factory, but certainly not a newborn, which had neither buildings nor equipment, “factory No. 166”. If there was any logic in all this (it might not have been, in July 1941, in an atmosphere of growing chaos and collapse, not such decisions were made), then it consisted in the fact that the Tupolev Design Bureau became “ownerless” and pushed there was simply no one to release the Tu-2 program.

"Freedom comes naked." It seems that this is exactly what happened with the unique aircraft and the engineering team that created it. At the end of July 1941, TsKB-29 (“sharashka” of the NKVD) was officially liquidated. More precisely, the leadership of the NKVD liquidated the design bureau within its structure. Which, of course, is logical and natural. But the valiant Chekists were in no hurry to release (not to mention apologize to the innocent people who suffered) the designers. The theater of wild absurdity continued for several more years! On July 21, 1941, A.N. was released. Tupolev. All the other "zeks" went to Omsk as well as

supposed to be under escort. In Omsk, the "special contingent" was settled in a two-story brick house, surrounded by a blank fence, with barred windows. The “criminals” were taken to work (to draw drawings marked “secret” and “Soviet secret”) on an ordinary city tram, but under escort. The escorts, of course, were listed in the dangerous and difficult Chekist service, received military orders, and those who survived today are considered veterans of the Great Patriotic War ... The first group of specialists (about 20 people in total) was released on August 9, 1941. Finally, the "special prison of the

UNKVD in the Omsk region" was liquidated only on September 30, 1943. The liquidation of the prison, again, did not mean the release of all prisoners. Already something, but there were enough prisons and prison-design "sharashkas" in Stalin's empire. For SP. The Kazan queen was found, for R.L. Bartini is Taganrog recently liberated from the Nazi occupiers. Surprisingly different. Deprived of any support "at the top", Tupolev's team simultaneously built a plant, reworked "project 103" for the installation of M-82 air-cooled engines (the same ones that were saved by the courage of the chief designer and secretary of the regional committee), set up production and testing of the aircraft. And what is most surprising - built, adjusted and tested!

The first flight of the lead aircraft "103V" with M-82 engines took place on December 15, 1941. The first serial aircraft was produced at the end of February 1942. In the autumn of 1942, military trials began on the Kalinin Front, two air regiments were armed with Tu-2 aircraft: the 132nd OBAP and the 12th BAP. Front-line pilots left rave reviews about the new machine, which - unlike the "pawn" - was capable of taking large-caliber bombs, up to and including the FAB-1000, and, moreover, turned out to be practically invulnerable to the "Messers" (during military tests, no one "Tu-2" was not shot down by enemy fighters!). And then, when the plant number 166 became really operating

aircraft factory, issued an order of the NKAP No. 763 dated October 10, 1942:

> In pursuance of the GKO resolution, in order to increase the production of fighter aircraft, I order:

a) stop the production of Tu-2 aircraft at plant No. 166. Keep the equipment, fixtures and technical documentation for the Tu-2 aircraft available at the plant fully;

b) put the production of Yak-9 aircraft at plant No. 166 ...

Orders are not discussed. At war. After the war is not a sin and think - was it worth it "in order to increase the production of fighter aircraft" Yakovlev to destroy the established production of the best front-line bomber? Especially in the very same year 1942, in which, as the attentive reader, of course, remembers, Stalin gave order No. 0496, in which he demanded "be sure to use fighters to solve bombing tasks during the day on the battlefield." Comrade Stalin gave such orders not from a good life. Bombers were sorely lacking. Issued in 1942: (2)

- 858 DB-3f bombers; - 2524 Pe-2 light bombers; - 9918 fighters, including 5966 Yakovlev fighters. There were no such absurd proportions between the production of fighters and bombers in any of the leading aviation powers in the world. So, for example, in 1941-1942. the production of bombers in Germany (not even counting the dive "Ju-87") amounted to half of the total production of combat aircraft. Shakhurin writes in his memoirs that Stalin later admitted his decision to stop the production of the Tu-2 was wrong. Moreover, he even slightly scolded Shakhurin for not complaining about Stalin to the Central Committee. The advice is good.

But belated. The last person to complain about Stalin to the Central Committee was Lenin, but his complaint (the famous dying “letter to the congress”) had no effect ...

Chapter 17 FATAL WORKS

Remember, dear reader, Nekrasov's poem "Railway"?

> Listen, my dear: the fateful works are over
> - the German is already laying the rails.
> The dead are buried in the ground...

They say that great poets are endowed with the gift of prophecy. Whoever and no matter how today relates to Nekrasov's work, it should be recognized that by the winter of 1941 only one line was fulfilled: the "German" really diligently laid the rails, "altering" the wide Russian gauge to fit the size of the wheel sets of German cars. Everything else did not come true: the bodies of hundreds of thousands of the dead were thrown onto the battlefield, and the "fatal works" to create huge mountains of weapons, which began during the years of the second five-year plan, not only did not end, but, by and large, were just beginning. And although consideration of the course and result of these works greatly takes us beyond the time frame of this book, without understanding these results it is impossible to evaluate everything done by the "party and government" with the domestic aircraft industry in

1939-1941. The colossal scope of work on the creation of new aircraft and new design bureaus was crowned (not counting an even larger number of experimental machines) with the launch of the following types of aircraft into mass production:

a) MiG-3, LaGT-3, Yak-1 fighters; b) Su-2,

Yak-2/4, Pe-2, Yer-2, ANT-58 bombers; c) Il-2 attack aircraft. And what was

left of all this diversity

by the winter of 1941-1942?

Let's start from the end of the list, because the history of the production of "IL-2" extremely strongly influenced the fate of all the other participants in the Great Races. Stalin liked the Il-2 (although at one time, in front of Ilyushin, he defiantly threw his application into the trash with a request to release him from administrative work and allow him to concentrate on what Ilyushin knew how to design aircraft). The armored attack aircraft actually turned out to be a very successful and necessary vehicle (although it was neither a "flying tank" nor an air tank destroyer - see Chapter 5). I don't know how it is now, but in those distant years, when the author of this book was doing an internship at plant No. 18, which became the Kuibyshev aircraft plant, there hung a memorial plaque with the text of Stalin's famous telegram: "You let our country and our Red Army down . ***You still do not deign to produce "IL-2". The IL-2 planes are now needed by our Red Army like air, like bread. Shenkman*** (factory No. 18) ***produces one Il-2 a day, and Tretyakov*** (factory No. 1) ***produces one or two MiG-3s. This is a mockery of the country, the Red Army ... I ask you not to take the government out of patience, I demand that more Ils be produced. I warn you for the last time."*** A few lines, written in the frenzy of December 1941, crossed out the

program of the MiG-3 fighter. All the labors, all the intrigues, all the sacrifices of test pilots - everything went to dust. Three huge plants: Moscow aviation No. 1, Voronezh aviation No. 18, Moscow aircraft engine No. 24, evacuated to Kuibyshev in the fall of 1941, turned into a huge production complex for the production of Ilov. After the Stalinist telegram, the production of the MiG-3 at plant No. 1 was immediately curtailed, and it was not resumed anywhere else, since the engine plant No. 24 also curtailed the production of AM-35/37 engines and the low-altitude AM- 38, barely keeping up with the colossal production of attack aircraft (8229 Il-2s were commissioned in 1942, 11193 in 1943, in total 35,668 Ilovs were produced during the war, which is an absolute world record for the production of a combat aircraft one type). The next (after the MiG) "victim" of the Il-2 attack aircraft was the Yer-2 bomber. If this stillborn project is still

could somehow be brought back to life, then only by installing powerful high-altitude motors. Those at that time were only the Mikulin AM-37. After the curtailment of their production at the 24th plant, the fate of the Er-2 was finally decided.

Light bombers "Su-2" and "Yak-4", with their scanty bomb armament, weak defensive armament and almost zero armor, unable to perform the work of a low-altitude "battlefield aircraft" or a full-fledged bomber, were ("Yak" - even before the start of the war, and "Su" - a year later) were taken out of production and out of service with the Red Army Air Force. The program for the production of the magnificent

ANT-58 bomber (103, Tu-2) was ruined: firstly, by the intrigues of competing clans, and secondly, by the lack of an engine (all the same AM-37). As mentioned above, the Tupolev Design Bureau developed a variant of the “aircraft 103” with M-82 air-cooled engines in an extremely short time, but the huge work on the construction, factory, and then military tests of the Tu-2 was at the end of 1942 reduced to zero intrigues of A.S. Yakovlev, who successfully “captured” one aircraft factory after another at that moment.

What, as a result of all the efforts, remained in the "dry residue"? One and only "semi-bomber" "Pe-2", with a short range and bomb load at the level of single-seat single-engine fighter-bombers ("Kittyhawk", "Focke-Wulf-190"). Attack aircraft and "pawns" with greater or lesser success could solve tactical tasks to destroy enemy targets on the front line and in the near rear of his defense. This is important, but the tasks of bomber aviation are by no means exhausted by this. Not a single full-fledged medium front-line bomber was in production at all!

This situation - completely unthinkable in a country that has been preparing for a large-scale war for many years - forced the resumption of production of the DB-3f. This bomber - excellent for the late 30s and already out of production in April 1941 - was riveted in the distant Komsomolsk-on-Amur right up to the very end of the war (858 aircraft were produced in the 42nd year, 1586 - in the 43rd year, 706 - in the 44th year, 485 - until the Victory Day in the 45th). Of course, neither in quantity nor in quality is the release of such more and more

more outdated low-speed "bomber carriers" could not provide the task of equipping operational bomber aircraft
destination. Supplies American twin-engine bombers A-20 "Boston" and B-25 "Mitchell" (in total, 2771 and 861 aircraft were received, respectively) somewhat improved the situation in the so-called "long-range aviation" (although the "long-range" action of these air regiments is rare exceptions - and there was no question), but large batches of American bombers began to arrive only in the 43rd - 44th years. As they say, "to the cap analysis." The study of the consequences of such a "distortion" in the development of strike aviation requires a separate, serious study. In the meantime, we note only one fact, which lies, as they say, "on the surface." In 1942-1943, the Wehrmacht fought on a front thousands of kilometers

away from factories in Germany. And if “eggs and milk” could still be taken away from the defenseless population of the occupied regions of the USSR, then it was impossible to find cartridges, shells, mines (and high-octane aviation gasoline, too) on collective farms. All this had to be carried in thousands of echelons by rail from Bavaria and Saxony to the Don and Terek. And the rivers in the west of the Soviet Union flow absolutely "correctly" from the point of view of the country's defense - in the meridian direction, from north to south. Or from south to north, which in this case is not important. The important thing is that every projectile and every bullet fired at Soviet troops was transported across one of about a dozen major railway bridges across the Bug, Dnieper, Dniester, Neman, Dvina. How would the combat effectiveness of the Wehrmacht be affected by the systematic and continuous destruction of these dozen bridges by air strikes? Alas, this question has not been practically tested. A thousand attack aircraft, almost monthly arriving at the front, inflicted direct and obvious damage to the Wehrmacht (visible through the eyes of any commander). Did anyone in the high headquarters consider the expediency of resources and production capacities from the production of Il-2 and Pe-2 to the creation of full-fledged medium and long-range aviation? Everything that we know about the mechanism and procedure for making decisions in the “party and

redistribution parts

government", allows us to give only a negative answer to this question. Has anyone

calculated the comparative effectiveness of dropping explosives in the form of aerial bombs and supplying partisans behind enemy lines with the same explosives? According to the calculations of the chief saboteur of the Red Army I.G. Starinov, for all the years of the war, the partisans used up a little more than 1 thousand tons of explosives, which amounted to only 1% of the total mass of air bombs dropped on railways behind enemy lines. At the same time, the damage (destruction of railways and bridges, destruction of rolling stock and cargo) from sabotage was ten times higher than the damage inflicted on the enemy as a result of air bombardments of transport routes. (116, p. 199) Such an irrational use of a resource that is extremely scarce in a war - explosives and sorties - is explained (along with all other reasons for the lack of a well-thought-out concept of waging a sabotage war) and the absence of a full-fledged bomber, on the basis of which only operational military transport aircraft. Polikarpov's Po-2 "maize plant", with its carrying capacity of two boxes of grenades, could not, of course, solve the problem of supplying partisans deep behind enemy lines ...

Bomber aviation was a complete failure. With the fighter - at first glance - the situation is much better. At the very least, the volume of fighter production was huge: from the beginning of 1941 to May 1945, the Soviet aviation industry produced 54,606 aircraft. More than half (58%) of the total number were Yakovlev fighters ("Yak-1\7\9\3"). And judging by the way events unfolded in 1941-42, Yakovlev could even become the monopoly "king of fighters." The MiG-3 was taken out of production at the end of 1941. As a "blank" for the development of a full-fledged front-line fighter, the MiG was no better and no worse than the Yakovlev aircraft. But - fell under the hot hand (telegram) of the Owner, was left without a motor and without a manufacturer, and on this

ended.

The choice between "Yak" and "LaGG" was beyond doubt. There was no reason to spend an aircraft engine, which was scarce in the war, plus such

the same scarce air gun for the production of the no longer varnished “coffin”, if the same engine and gun could be sent to the plant producing the Yak-1 / Yak-7. Unfortunately, not everyone understood this right away, and during 1941 the production of LaGGs was almost twice the production of Yakovs (2463 and 1354 cars, respectively). Therefore, with all personal likes and dislikes, one cannot but admit that, in seeking to curtail the production of LaGGs, Yakovlev acted in a direction that completely coincided with the state interest. At the same time, however, the question of what exactly, what other fighter to put in the series remained open. There were options. Despite all the dramatic events of the

pre-war years, despite the "withdrawal" of the best personnel and the constant forced transfers from factory to factory, the Polikarpov Design Bureau still existed, and the development of the I-185 fighter continued. The next move - the evacuation from Moscow in October 1941 - threw Polikarpov to Novosibirsk, but not to the plant number 153 (which would be quite logical), but to the premises of the city menagerie. For flight tests, the former aeroclub airfield was provided. Even under such conditions, factory flight tests, and then state tests of the I-185 with M-71 and M-82 air-cooled engines, were successfully completed on March 28, 1942.

It was on the basis of the results of these tests that the Air Force Research Institute compiled the report with which we began (see Chapter 13) the story of the brilliant designer and the rat kings. Namely: ***“In terms of its flight characteristics, the I-185 is superior to all existing domestic serial and foreign aircraft. In terms of piloting technique and take-off and landing properties, the aircraft is simple and accessible to pilots of average and below average qualifications.*** But Yakovlev, who enjoyed the Master's great confidence at that moment, firmly stood

his ground. At the beginning of January 1942, the State Defense Committee issued a decision ordering to stop the production of LaGG-3 at plant No. 153 in Novosibirsk. However, it was not the fighter of the Polikarpov Design Bureau, which was nearby, in the neighboring menagerie, that was launched into the series, but the Yak-7 fighter. At the same time

production of his aircraft and a huge plant number 21 in Gorky, but Shakhurin (according to his memoirs) opposed such a step. As a result, the decision to launch the Yakov in a series at the Gorky plant was not canceled, but was temporarily postponed for two to three months.

Further tragicomic incidents, which by a lucky chance ended with the birth of the La-5 fighter, have been repeatedly described in historical and memoir literature. (98, 109, 113) Let us briefly recall the main outline of events. Lavochkin pinned his main hopes on the new in-line liquid-cooled engine M-107. With the same dimensions as the serial M-105, the new engine of V. Klimov (nee the French Hispano Suise) developed a takeoff power of 1400 hp. s, nominal - 1300 hp at an altitude of 5 km. True, he weighed 160 kg more, but an increase in power by 30% theoretically made it possible to “pull out” the flight characteristics of the LaGG to the level of war requirements. In the meantime, two copies of the M-82 air-cooled engine arrived in Gorky from Perm on a transport "Li-2", and even accompanied by the deputy chief designer of the engine plant V.I. Valedinsky. There was no time to examine the drawings, and the new engine was brought in its most natural form by a

gantry crane to the fuselage of one of the serial LaGG-3s. The round "star" of air cooling, of course, did not fit into the contours of the narrow fuselage of the aircraft, designed for an in-line engine. Further events as presented by Deputy Lavochkin S.M. Alekseev happened like this:

> All the heads of workshops, several designers, the chief engineer of the plant sat around the plane. They brought wooden slats, attached them to the outer contour of the motor and to the fuselage ... We could not apply the classic scheme for installing an air-cooled motor with a “skirt” to release air without a serious alteration of the fuselage. Then, on the sides of the aircraft, large "scoops" were made on the left and right, through which the cooling air came out. Opposite the scoops, the temperature of the cylinder heads was normal, and they overheated above and below. Valedinsky then began to redo the deflectors for each

> cylinder, and he managed to achieve uniformity of temperature across all cylinders. It was one of the decisive factors in the creation of a new fighter ...
>
> By the time Lavochkin arrived, one side of the aircraft had been sewn up with a false side over the old skin. We put sectors of slats, and plywood on them. It turned out a round fuselage .... But when the plane was almost ready, the State Defense Committee ordered the transfer of plant No. 21 to Yakovlev and the transition to the production of Yak-7 fighters. Lavochkin and his design bureau were ordered to relocate to Tbilisi, to plant number 31 ...

The new plane was completed at an incredible pace, without calculations, without drawings, “on one leg”. On March 21, 1942, the newborn was rolled out to the factory airfield, and the factory pilot G.A. Mishchenko lifted him into the air. The first flight did not last long - the temperature of the oil in the engine rapidly went to the red line. Nothing else could be, since the oil cooler from the serial LaGG-3 was “attached” (you can’t pick another word here) to an engine one and a half times more powerful, and therefore requiring more heat removal. Be that as it may, the first flight of the new fighter took place, which was immediately reported to Moscow. Moscow responded with the arrival of a commission of two engineers and two test pilots from the Air Force Research Institute and the LII NKAP. 5 (five) flight days were allotted for the decision of the commission.

In the meantime, Yakovlev's firm aggressively settled down in a new place. The plane (then it was still called "LaGG-5", the name "La-5" came later) was simply not allowed back into the shop. Then they banned the use of the factory airfield. Then the Lavochkin design bureau was removed from the "gasoline allowance". "LaGG-5" was run illegally, at the expense of the funds of the senior military representative. Lavochkin's car became a joke, and the general designer went to work on foot. Through deep April puddles. Finally, a formidable order from the State Defense Committee came: to load the design bureau and the plane into trains and immediately leave for Tbilisi.

On April 22-23, pilots A.P. Yakimov and A.G. Kubyshkin began "commission tests" of the new aircraft. For flights, they used a military runway filled with melt water.

air defense airfield ten kilometers from the plant. Everything broke down in flights: the flaps release mechanism failed, the oil pipeline broke and the cockpit lantern was flooded with black used oil, the engine either stalled on landing, or, on the contrary, “refused” to slow down. When landing (in fact, an emergency one), after the second flight, the car stood on its nose, swayed - but did not fall forward, breaking itself and killing the pilot, but backward, on the tail wheel. The good fairy, who obviously flew into Gorky in those days, took pity and saved the lives of courageous pilots. No one died during such enchanting "tests", the plane remained intact, the identified shortcomings were eliminated right in the field, day and night, in the light of car headlights. Overall result: you can fly, but the engine gets very hot. Moscow thought and gave ten days to correct the defects of the new aircraft.

History knows the name of the guy who went into the record store of the glorious city of Liverpool and asked for a record with the group’s records that he was playing in the Cavern pub (this question attracted the attention of B. Epstein, who went, listened and decided to take on the “promotion” of the quartet, which under the name "Beatles" forever turned the world of music). Unfortunately, to this day, the name of the worker of plant No. 21 is not known, who found a wooden packing box in the corner of the workshop, and inside the box there was a brand new radiator with a factory passport. It was a powerful radiator, which the Yakovlevites brought with them for installation on a fighter with an M-107 engine. The required heat removal from the oil system of the M-107 and M-82 engines was approximately the same, so this radiator could solve the main problem. The legend says that Lavochkin forbade taking someone

else's, but the team that went into courage did not listen to him. In one night, they knocked out a new duralumin fairing to a new radiator and screwed it all to the plane. Now the future "La-5" flew, and the oil in it no longer boiled. Corkscrew tests were carried out on the morning of May 6, 1942. This deadly

exercise can only be done after careful calculations and blowing in a wind tunnel. Therefore, they decided not to even talk about the corkscrew to Lavochkin. Do not upset in vain.

... It was not yet five in the morning when everyone gathered at the plane. Yakimov lifted the plane into the air.

At this time, Lavochkin came to the airfield: -
What kind of flight is this? We've finished testing! ...

Yakimov made a gentle turn, began to slow down, made several trial runs, completed half a turn of a corkscrew to the right and left. Lavochkin's head was completely slung over his shoulders. Yakimov made a turn, exited normally, made two turns, the machine obeys, exits without delay. Lavochkin began to straighten up a little...

Aviation does not forgive even a hundredth of such liberties. Hundreds of planes have crashed after making the most harmless-looking changes to long-established and reliable machines. According to

all the laws of logic, aerodynamics and statistics, the history of the birth of La-5 should have ended in disaster. But it passed. On May 20, a new GKO decision and an order from the NKAP were issued: to return Lavochkin Design Bureau to plant No. 21, to withdraw the task of producing the Yak-7 from the plant, and to begin production of the LaGG-5 fighter with the M-82 engine. The first 200 serial machines left the factory with "overhead sides" in the forward fuselage - the designers simply did not have time to draw a normal design for the new fuselage ...

Only two years later, the plane, assembled in a wild hurry, turned into a regularly and reliably flying La-7 fighter. The use of the notorious "delta wood" was abandoned almost completely, the wing was made with normal metal spars, the engine was boosted and equipped with a direct fuel injection system. "La-7" became the best Soviet fighter of World War II. In appearance, it turned out to be like two drops of water similar to the Polikarpov "I-185" with the M-82 engine. The same "I-185", the state tests of which (we repeat this again) ended with enthusiastic reviews of the pilots on March 28, 1942. However, one external similarity is not enough. According to all performance characteristics, "La-7" slightly, but fell short of the level of "I-185". There is nothing offensive in this statement for Lavochkin and his associates - an altered suit produced by the Red Seamstress factory will always be somewhat worse than a product from the best Parisian couturier. Absolutely the same was only the scheme of installation of guns firing through the plane of rotation of the propeller, and the design

synchronizers. It's just that the Polikarpov Design Bureau (earlier than anyone else, still on the "seagull" born in 1940, worked out the installation of guns over the "star" of air cooling) transferred these drawings to Lavochkin.

Nikolai Nikolaevich Polikarpov was lucky to live to see the launch of La-7 in a large series. He died on July 30, 1944. The patriarch of Soviet aviation was then only 52 years old.

We will now try to sum up the general results. What did Soviet aviation get after Comrade Stalin decided to personally undertake its technical re-equipment at the beginning of 1939?

What "young, obscure designers" were able to give to the Motherland "in hardest time for her?

The main component of the Air Force - attack aviation - entered the war with the aircraft of Ilyushin and Tupolev / Arkhangelsky ("DB-3f" and "SB / Ar") and fought until the end of the war on the aircraft of Ilyushin and Tupolev / Petlyakov ("DB-3f", " IL-2", "Pe-2"). The "young unknowns" did not give the Motherland a single serial bomber or attack aircraft. All the fuss and excitement of 1939–1941 ended with the appearance of a couple of hundred Yak-2/4 unsuitable for combat operations and painful, many years of attempts to "bring to mind" the long-range bomber "Er-2". The mountain gave birth to a mouse. Fighter aviation began the war exclusively on

Polikarpov's machines ("I-16", "I-153", "MiG-3"), then fought on Yakovlev and Lavochkin's machines, one of which ("La-7") came close to the end of the war in terms of its tactical and technical characteristics, it approached the level of the Polikarpov I-185. If the highly experienced design teams of Ilyushin, Polikarpov, Tupolev had not been interfered with,

if the engineers of the good old Russian school had not been imprisoned, shot on absurd denunciations, then they would have simply done what they were actually doing. Namely: - the Ar-2 bomber, which successfully passed state tests, and the I-180 fighter, which successfully passed state tests, were launched into serial

production;

- brought to the stage of readiness for production and combat use the best I-185 fighter in the world and the best in the world

front-line bomber "Tu-2".

Taking into account the fact that both Ar-2 and I-180 were only a deep modernization of the SB bomber and I-16 fighter, which had long been mastered by industry and the flight crew, it can be safely assumed that by June 1941 of the year with new combat aircraft it would be possible to re-equip most of the aviation of the western military districts. Taking into account the fact that work on the I-180 took place under conditions of open persecution of Polikarpov, and work on the Ar-2 was carried out under conditions of arrest and conviction of most of the Tupolev Design Bureau (the original developer of the SB-Ar series), it can be assumed that under normal conditions, the development and mass production of the I-180 and Ar-2 would have been completed even earlier. Insofar as we are not talking about projects and fantasies, but about aircraft that actually existed in metal and flew in the air ("I-180", "I-185", "Ar-2", "Tu-2"), the above forecast can be considered highly probable. It is much more difficult to answer the following question:

"What would happen if Comrade Stalin really managed to "postpone the start of the war with Nazi Germany" for a couple of years?" The question is very difficult. The Soviet-German war that began in June 1941 so changed everything (economics, politics, morality) in these two countries, so qualitatively changed their relations with other countries, that extrapolation of military development trends to the hypothetical situation "if there were no war" can lead to to serious prediction errors. And the author would not voluntarily climb into the jungle of reasoning on the topic "what would happen if" ...

If the Soviet "historical science", with extraordinary lightness in thought, without even bothering to attempt a comparative analysis of the trends in the development of aviation science and technology in Germany and the USSR, would not assert that it was very beneficial for us to "pull off". Why? But because "then the Soviet Union would have had time to complete the rearmament of the army in general and military aviation in particular." This strange (to put it mildly) hypothesis petrified from countless repetitions and turned into an indisputable truth in the minds of millions of readers. Not to mention the fact that only a defeated army is capable of "completing rearmament", the very logic

such reasoning is useless. Yes, of course, 15 minutes of extra time in a football match is guaranteed to lead to victory. But on one condition: if the entire opposing team sits on a bench and allows you to score goals into an empty net. And if not? And if the enemy also tries to use each of these 15 minutes to strengthen his defense and storm your gates? Hitler's Germany began preparations for a world war with a huge (relative to the Soviet Union) delay. At that time (the

beginning of the 1930s), when, in the context of the most severe world economic crisis, Stalin's emissaries were buying up aviation, aircraft engine, instrument-making plants, buying up and stealing technological secrets and luring leading Western specialists with fabulous salaries, Germany was plunging into a quagmire of internal political strife and, in fact, teetered on the brink of civil war. At that time (mid-30s), when mass production of combat aircraft of a technically new generation was unfolding in the USSR (high-speed monoplanes with retractable landing gear and wing mechanization), Hitler was just "cleansing" the political space of his power in Germany, and the newborn Wehrmacht was carrying out exercise with cardboard mockups

tanks.

At the very first military clash (Spain, 1936), it turned out that Soviet tanks and planes were better than German ones. What was not known then, but it is well known now, is that the Soviet military industry outnumbered the enemy in quantitative terms, releasing in 1936-1937. military equipment in huge, unthinkable for Germany, quantities. In the future, Hitler's Germany was able, relying on the centuries-old traditions of the skill of German

engineers and workers, on the huge scientific and technological potential of its industry, by the beginning of the world war, to catch up with the Soviet Union in terms of the technical characteristics of aviation weapons. That's it - just catch up. The Heinkel-111 bomber was no worse than the DB-3f, the high-speed Dornier-17 was no worse than the SB, the newest (for September 1939) Messerschmitt-109E fighter was even better in some ways. -16".

As the Germans caught up. In the number of aircraft produced, the Soviet Union was still ahead. In 1940, the warring Germany produced 1877 single-engine fighters and 3012 bombers, the USSR - 4179 and 3301 respectively. The following year, 1941, Germany already overtook the Soviet Union in terms of the number of twin-engine bombers produced (3783 versus 2861), although it was even further behind in the production of fighters (2852 versus 7080).

In general, the quantitative indicators of the production of combat aircraft in the Soviet Union were higher all the time. With one exception, Germany produced 23,805 single-engine fighters in 1944, in an attempt to counter the massive Allied strategic bomber strikes. In the same year, "only" 16,703 fighters were produced in the Soviet Union (including 11,607 Yakovs). But this breakthrough in the production of fighters was the last effort of the German industry - already at the end of 1944, production and the transport system began to irreversibly fall apart ... As for the qualitative, scientific and technological achievements, in this aspect the

German aviation industry quickly caught up, and then significantly outstripped Soviet Union. Success was achieved by concentrating the efforts of German science and industry in key areas: aircraft engines, weapons, radar, automation and radio communications. The names of the aircraft remained the same: Messerschmitt-109, Junkers-88. Their appearance changed little or nothing. The “stuffing” was radically updated and improved, before

everything is

engines. The first production Messerschmitt-109 left the factory in Augsburg in 1937 with a Jumo-210D engine with a take-off power of 680 hp. The "Messer" of the E series already had a DB-601A engine with a maximum short-term power of 1175 l / s. In the spring of 1941, the production of the F-4 series begins with the DB-601E engine with a take-off power of 1360 hp. The following year, a new DB-605A engine with a take-off power of 1475 hp is installed on the same airframe. With Methanol Water Injector and 96 Octane Gasoline DB-605AS Engine

developed a power of 2030 hp. at an altitude of 500 meters. Simply put, in 6 years (from 1937 to 1943), the power of the Messer engine increased exactly

three times! "Junkers-88" (which was to become the most massive twin-engine bomber of the Luftwaffe) began its flight biography with Jumo-211B-1 engines with a capacity of 1200 liters. s, on the eve of the invasion of the USSR, the production of Junkers of the A-4 series with Jumo-211J-1 engines with a power of 1340 hp begins. At the end of the war, the Jumo 213E was installed on the Junkers - an engine with a three-speed two-stage supercharger and a nitrous oxide injection device that developed 2000 hp. (there were variants of the "213th" with a short-term afterburner power of 2300 hp). With the Jumo 213 engine, the maximum speed of the Junkers-88 in the long-range reconnaissance version reached 640 km / h at an altitude of 8540 m. According to A.S. Yakovlev, ***"the Junkers-88 twin-engine bomber, although with great difficulty, still survived until the end of the war at a more or less satisfactory combat and technical level ...".***

And what happened with us? "Pe-2" started a war with M-105 engines with a capacity of 1050 liters. with, and ended the war with them. The DB-3f was produced for five years (from 1940 to 1945) with the same M-88 engine, the take-off power of which was slightly increased only at the end of 1943 (from 1100 to 1250 hp). Yakovlev's fighters (from the experimental I-26 to the most advanced Yak-3) fought back the entire war with the M-105 engine. True, already in 1942 (despite the protests of the engine designer V. Klimov), the engine supercharger was reconfigured to obtain maximum power at low (2–3 km) altitudes. The result was the M-105 PF with a maximum power of 1180 hp. In 1944, the power of the M-105 PF-2 reached 1240 hp. - and this turned out to be the limit of the achievements of domestic motor building. With such an engine, they both flew and fought against the "Messers" of the G

and K series with engines of 2000 hp. Yes, and if this M-105 worked fine! The Yaks returned from the flight, filled with engine oil from bow to keel. The most terrible was the loss of forward vision, which occurred at the most intense moment of the battle - jets of oil from the engine running at maximum speed flooded the cockpit lantern. Case

it got to the point that “craftsmen” at front-line airfields installed oil deflectors on the hood of the Yak or attached an enema with gasoline to flush the oil from

glass...

We will not bore the reader with another batch of tables and figures. And without tables, it is clear that the "Messer" with a motor of 2000 l / s. was better. Miracles do not happen, and if the Yak-3, this notorious "lightest fighter" approached the Bf 109G in terms of basic flight parameters, then this had to be paid dearly. The “lightest” Yak-3 became due to minimal armament, minimal safety margins, flight range less than that of the first experimental I-26, lack of basic equipment: in 1944, some Yak-3 series were produced with one receiver, without a transceiver radio station. And this is in 1944!

The achievements of the "gloomy German genius" were by no means limited to bringing the "ordinary" piston engines to the limit of possible perfection. On April 2, 1941, that is, even before the start of Operation Barbarossa, the Heinkel He-178, the world's first twin-engine jet fighter, made its first flight. A year later, on July 18, 1942, the first flight of the Messerschmitt Me-262 twin-engine jet fighter took place. This aircraft was to become the world's first mass-produced jet fighter. With the most powerful weapons (four 30-mm guns), the Me-262 developed a speed of 800 km / h near the ground, the maximum speed at an altitude of 6 km reached 865 km / h. This miracle of technology, ahead of its time by at least five years, was created not in one, experimental copy (although this would be a huge achievement!), But was produced in a large series: by the end of 1944, 452 "Me-262" were manufactured , in total, 1433 Messerschmitt jet engines and 6424 Jumo-004ÿ turbojet engines were produced. The Arado Ar-234 twin-engine jet bomber began testing in 1943 and went into series production the following year. Ceiling - 11500 meters, maximum speed 752 km / h. On the Ar-234C modification with four BMW-003 turbojet engines, a speed of 874 km / h was

achieved. And this super-bomber, absolutely invulnerable to Soviet air defense

sample 1944, was created not in a single sample, but in the amount of 214 copies. In

addition, there was an ultralight (take-off weight of 2800 kg) Heinkel He-162 single-engine jet fighter. The first flight took place on December 6, 1944. With the BMW-003 engine, the fighter developed a maximum speed of 834 km / h (900 km / h in afterburner mode) and was able to fly 970 km at an altitude of 11 km. At the time of the capture of aircraft factories by the Allied forces, 116 Non-162s were produced and another 800 aircraft were at various stages of assembly. In addition, as early as October 1941 (the time the

battle for Moscow began), flight tests of the Messerschmitt Me-163 short-range interceptor missile fighter (in fact, a reusable manned anti-aircraft missile) began. A liquid-propellant rocket engine with a thrust of 1700 kgf worked for 6 minutes, accelerating the aircraft to a speed of 955 km / h, and provided a

climb of 9 km with a phenomenal vertical speed of 80 m / s. Thanks to the use of a triangular wing with a large sweep, the Me-163 (unlike the stillborn Soviet project of the Bi-1 rocket fighter) completely retained stability and controllability at transonic speeds. Serial production began with a huge delay, in February 1944. A total of 360 Me-163s were produced. In addition, an unmanned projectile (“cruise missile” in modern terms) “Fiziler” Fi-103 (better known as “V-1”) with a ramjet engine was produced in huge series. 11,300 (eleven thousand three hundred) of these "cruise missiles"

were fired from the Baltic coast towards London. Finally, the highest achievement of German engineers was the development, creation and launch into large-scale production of the V-2, the first operational tactical range ballistic missile in history.

A liquid-propellant rocket engine with a thrust of 26,000 kgf accelerated the rocket to hypersonic speed in 80 seconds of operation, allowing it to go beyond the earth's atmosphere to a height of 80-120 km and achieve a horizontal flight range of more than 300 km. It's hard in this

believe, but the first successful launch of this genuine miracle of science and technology took place on October 3, 1942. Looking ahead a little, we note that it took both the Soviet Union and wealthy America a long four years just to copy and launch rockets with similar parameters. Until the end of the war, Germany produced and launched 10,800 (ten thousand eight hundred!!!) ballistic missiles at facilities in England.

All of the above is only one of the components of the gigantic successes of German science and technology. We have not yet said anything about the developed, tested, launched in a large series of ground and airborne radars, jamming and electronic countermeasures systems, about guided planning bombs, about infrared guidance systems, about on-board gyroscopic shooting sights, about several types of unmanned radio-controlled anti-aircraft missiles ... All these - and many, many others - the latest weapons, the

German industry created simultaneously with the mass production of "conventional", traditional piston engines and aircraft, under the conditions of a naval (i.e. so, for example, on December 24, 1944, 1,300 four-engine bombers bombed the V-2 launch positions). It is terrible to think what Nazi Germany could have armed herself with if she had not had to spend her limited resources on the production, in particular, of 23,805 conventional fighters in 1944 alone. And what would happen if the Germans threw their best minds not on a three-speed two-stage centrifugal supercharger for the Jumo 213E engine, but on a high-speed centrifuge for separating uranium isotopes?

Let us return, however, to the pre-war Soviet Union. How did it happen that in 1939-1941, as a result of the titanic efforts of the “party and government”, our military aviation and aviation industry only lost time, and then lost that technical superiority over the Luftwaffe, which was so clearly manifested during the war in Spain ? Despite the author's ardent desire to give extremely short and simple answers (nevertheless, this

the book is a popular reading, not a scientific monograph), it will not be possible to answer the above question in monosyllables. Let us briefly outline only three components. First, in order to correctly understand

the reasons for the lag, one should remember - where did the previous successes come from? In the key component - the production of aircraft engines - the entire Soviet aircraft industry was based on Western licenses, technologies, and equipment. The brilliant foresight of Comrade Lenin came true - in the bourgeois West there were (and in sufficient numbers) "useful idiots" who, in the early 1930s, in the midst of an acute economic crisis, with great pleasure sold to Stalin entire factories and production lines for aircraft engines. Namely, imported motors manufactured on imported equipment under the modest names M-17 (German BMW-6), M-22 (French GR-9Aq), M-25/62/63 (American R-1820), M-100 /103/105 (French 12Ybrs),

M-85/87/88 (French GR-14K) lifted the Soviet

aviation.

In the late 1930s, the situation changed dramatically. No, there are no fewer idiots, their capabilities have decreased. French ... to put it mildly - politicians brought their country to complete collapse, and now there is nothing to profit from in France (and the German occupation authorities would not allow anything technically valuable to be sold "to the side"). The English "idiots" were decisively pushed aside from the helm by Churchill and his team. The American President Roosevelt, a great friend of the Stalinist Union, was nevertheless forced to give in to public pressure and in December 1939, after the Soviet bombing of residential areas of Helsinki, to extend to the USSR the requirements of the so-called "moral embargo" (a system of mandatory government "recommendations" prohibiting the sale of aviation technologies to aggressive states). Fascist Italy remained a constant partner (Italian torpedoes manufactured by the Krasny Progress plant under the index 45-36N were in service with the Soviet aviation and navy until the early 50s), but Italian aircraft engines were not among the best in the world.

Only Germany remained - but there they had already got rid of the gullible "idiots", they had got rid of them decisively and cruelly. Of course, in the most difficult time for him, at the beginning of the World War, Hitler had to sell Stalin the latest aircraft. Of course, along with the aircraft in the spring of 1940, engines arrived in the Soviet Union, including the DB-601A engine installed on the Messerschmitt with a direct fuel injection system. Alas, the Soviet aircraft engine industry - even having a copy in front of it - was unable to establish mass production of injection equipment in a short time. The first (and last) serial aircraft engine with direct fuel injection was the M-82FN, which appeared on the La-5 / La-7 fighters only in 1943.

It was not possible to equip other large-scale engines with injectors (M-105 on Yaks, M-88 on DB-3f) until the end of the war. Just as it was not possible to bring the powerful “two-thousanders” (M-71, M-90, M-120, AM-36) to the stage of mass production. Just as it was not possible to "bring to mind" the unique aviation turbodiesels of Charomsky. Just as it was not possible to achieve stable operation of the M-107 engine (the same one, the experimental model of which Yakovlev stole from Lavochkin). They suffered with the “107th” engine until the very end of the war: it was either launched into a series, then removed again, the engine was warming up, “driving oil”, did not produce even 25 engine hours, as a result, the Yakovlev Yak-9U fighter (quite worthy competitor to Messerschmitt

"Bf-109" G) could not become a full-fledged combat vehicle.

The second, fairly obvious and indisputable reason for the scientific and technological backwardness that emerged at the end of the 1930s lies in mass repressions, the victims of which sometimes were entire design teams. So, in 1937-1938, the RNII, the main scientific center for rocket technology, was almost completely destroyed. Director of RNII I.T. Kleimenov was shot, his deputy G.E. Langemak - shot, the future General Designer of space rockets S.P. Korolev was sent to the Kolyma mines, the future General Designer of rocket engines V.P. Glushko was arrested and received 8 years in labor camp.

In 1938, the leadership of the Design Bureau of the Perm Aircraft Engine Plant was arrested in almost full force (aircraft engines of the Wright-Cyclone series,

i.e. M-63, M-71, M-82). The Chekists especially liked aircraft engine plant No. 29 in Zaporozhye (the line of the French Mistral-Major, i.e. M-87/88/89, M-90) - five chief designers were replaced there in three years: Nazarov, Vladimirov , Owl, Tumansky, Urmin. In the prison "sharashka" Charomsky and his colleagues created their turbodiesel ... It must be assumed that if

German engineers at that time were told that their Soviet competitors were considering new designs on prison bunk beds, in the intervals between interrogations "with passion" and death sentences, then they would consider it false and too much unbridled anti-communist propaganda. Alas, "he never studied and did not fully understand dialectics."

These words Ulyanov-Lenin wrote about another of his students (Bukharin), but they also fully apply to the characterization of our main character. Stalin did not understand the difference between the secretary of the party committee and the designer of aircraft, and did not understand that the methods of their "selection and placement" should be different. From the party secretary (as well as from the Stalinist general) it was required to be able to pound the table with his fist, yell at subordinates and transmit reports on milk yields and gains (as well as losses and trophies) to Moscow with minimal lies. The method of the "rat king" has fully justified itself in the search for and education of just such personnel. The new chiefs of the 1939 model knocked so that the table fell apart, yelled heart-rendingly, and were afraid to lie to the Master (they only became bolder after June 22, 1941). Zhukov and Timoshenko, of course, were more in line with Stalin's requirements than the drunken Blucher and Dybenko. Alas, in the subtle art of the theory of elasticity, aerodynamics and thermodynamics, such methods could not but lead to disastrous consequences ...

CHAPTER 18 MURDER PLANES

The third reason for the progressive lag of the Soviet aviation industry behind the German enemy should be called an erroneous, absolutely non-dialectical choice between quality and quantity. This question is very complicated, but Stalin solved it very simply. Too simple and clear. Shakhurin writes in his memoirs that Stalin set the task of bringing the production of combat aircraft to 70-80 aircraft per day (i.e., 2000 per month), which significantly exceeded the actual production of Germany and England combined). Even before the start of the war, a special construction headquarters was created as part of the NKAP, under which 25 construction and installation trusts were transferred! 9 new aircraft-building and 6 aircraft-engine plants were founded, in addition, in 1940 alone, 60 plants from other people's commissariats were converted to the production of aviation equipment. (107) By the beginning of the war, there were already more than 130 factories in the NKAP system! (108) On November 16, 1940 (i.e., seven months before the start of the war), by decision of the Politburo of the Central Committee, directors of engine and aircraft factories were obliged to give daily reports to the Central Committee of the All-Union Communist Party of Bolsheviks on the number of aircraft and engines accepted by the military representatives, broken down by each type . (16) You can be sure that from that moment on, the designer became the worst enemy for any director. The designer still cannot calm down, then he needs to lengthen the wing by 15 cm, then narrow the fuselage by 10 cm, and this is a restructuring of production, replacement of all equipment, templates, stocks. And the director needs to go to the “turntable” and report to Moscow how many production aircraft he has produced today, and God forbid that there are fewer of them than yesterday ...

> ... Bringing Churchill to me, he said: "Here is our people's commissar of the aviation industry, he is responsible for providing the front with combat aircraft, and if he does not, we will hang him." And Stalin made an expressive wave of his hand.

Pretending that I really liked this joke, I had fun
laughed...

Life has become better, life has become more fun. But in short. Shakhurin and Yakovlev (People's Commissar of the aviation industry and his deputy) with masochistic enthusiasm tell how strict the Boss was, as to any proposal to improve, change, modernize something somewhere, Stalin invariably answered: do it, but not a single production car from the plan I'll take it off. Shakhurin in his memoirs cites a completely wild fact:

At the beginning of the war, when the front's need for aircraft was not yet satisfied, Stalin proposed transferring all the machine tools of the experimental design bureaus to the factories. Again, I objected, convinced that, firstly, the designers did not have much equipment, and secondly, they were constantly working on modifying aircraft, and they needed machine tools. Stalin stated firmly:

- Now I'm a serial worker, the production of aircraft should increase. And the decision
took place, but, I confess, we
put on the brakes...

"They put on the brakes." Most likely, Stalin did not forget about the order he had given (he had a phenomenal memory, and there was a notebook with a pencil on the table), but he simply realized a little later what a catastrophic consequence the defeat of all the design bureaus could lead to, and even at the beginning of a protracted wars...

I have no doubt that some of the readers will be outraged. After all, it was not just that Stalin was going to actually destroy all the design bureaus of the country, but in a situation ***"when the front's need for aircraft was not yet satisfied."*** And our slogan was this: "Everything for the front, everything for victory." And that's why I had to ... No, dear comrades. That's not why I had to. The difficult philosophical
question of what is more important - quantity or quality - in relation to the reliability and survivability of combat aircraft is being solved

very simple and clear. Quality, that is, reliability and combat survivability, is more important. Why? Because in the system called "military aviation" the most important, most valuable and most scarce element is not aircraft, but experienced pilots. Many low-quality aircraft falling apart in flight reduce the number of living pilots, thereby catastrophically weakening the entire system. Emergency, round-the-clock work, teenagers losing consciousness from hunger at the machine tools, “front-line brigades” eliminating factory defects at military airfields in the snow and rain, and other scenes of the “great labor battle” so beloved by Soviet propagandists, paradoxically did not increase, but decreased the number and effectiveness of combat aviation operations.

From January 1, 1943 to May 9, 1945 (that is, already at the final stage of the war, when enemy air raids on “peacefully sleeping airfields” and “encirclement boilers” of 1941 are a thing of the past), irretrievable losses of Red Air Force personnel armies
amounted to:

- 9456 people were
killed; - 4438 people died in accidents and
catastrophes; - 10941 people went missing. (35, p.
312) Even if we assume that only half of the "missing" actually died due to technical accidents, then in this case the number of those killed by their own aircraft turns out to be slightly less than the number of those killed by the enemy.

I agree, at first glance, such an assumption will seem completely unbelievable and even insulting for the Soviet aviation industry. But here is what the aircraft designer A.S. writes in his memoirs. Moskalev: ***“... On one of the unremarkable days, two generals appeared at the plant: Lieutenant General Ageev and Major General Gurevich. At first they went to I. V. Fedin, and he sent them to me ... The generals told strange and sad things. The war was over, but the situation was not calm. Military aviation was in a state of constant combat readiness. Regular flights of our fighters were made. And suddenly it was discovered that the loss of Yakovlev's fighters had almost not decreased, although hostilities were no longer being conducted*** (emphasis added by me. - ***M.S.). What's the matter? It turned out that the planes were destroyed in the air in the process of maneuvering, since***

wings broke on them and, as a rule, the pilots did not even have time to throw themselves out on parachutes ... "

Further, Moskalev says that A.S. Yakovlev "turned the arrows" on the industry, which allegedly glued the wings with the wrong glue. After that, ***"the perpetrators were severely punished."*** Moskalev, on the other hand, was given the task to figure out and improve the gluing technology, but in the process of work, the engineering team came to the conclusion that the cause of the accidents was not a technological defect at all, but a design one - the same insufficient wing strength, which was the problem of Yakovlev fighters starting from the I- 26".

By the way, why were the wings (and not only the wings) on Soviet fighters glued? Gluing a multilayer "package" of resin and veneer is a very complex, time-consuming operation that requires the strictest technological discipline. Why was it not replaced by a simple, understandable, verifiable, mechanizable (group press riveting) technology for assembling an aircraft airframe from duralumin sheets? The answer to this question is "everyone knows". They "know"

so well that the very formulation of the question seems absurd. With duralumin in the country there was "tension"; All of Europe worked for Hitler, and only America worked for us, and even then not all of it, but only the northern half of the mainland. So I had to glue combat aircraft using the technologies of a furniture factory. As for the "deficiency of aluminum", we must

honestly admit that aluminum was really lacking. Just as there was not enough coal, oil, steel, cars, tractors, money. Resources are always less than you want, money is always not enough. This is their (resources) inherent property. Especially if military equipment is produced in such quantities as it was produced by the "engaged in peaceful creative work" of the Stalinist empire. Here are just two examples: a month after the start of World War II, on October 1, 1939, 12,677 aircraft were in service with the Soviet Air Force. (1, p. 352) This is almost twice as much as in Germany (4093), England (1992), USA (1476) combined. (20, p. 217) In 1939–1940 belligerent Germany produced 3377 Bf-109 single-engine fighters. The Soviet Union in the same two "peaceful, pre-war" years produced 6180 I-16 and I-153 fighters (18, 32)

Where was so much aluminium? I had to build the Stupino aluminum plant - at that time the largest in the world. In May 1941, its first stage reached its design capacity. But aluminum was still not enough? Let's try to check the history with the methods of another science - arithmetic.

The weight of the airframe of the Messerschmitt-109E all-metal fighter aircraft was 650 kg. How much duralumin should be spent on assembling such a glider? The question is difficult. On the one hand, the most loaded nodes and parts (spar shelves, docking nodes, fasteners) are made not from aluminum alloys, but from steel. On the other hand, it is impossible to cut a duralumin sheet in such a way that all the metal goes into action, without scraps and chips. Without further ado, let's assume that one ton of duralumin is needed for one glider (at the same time, we probably played it safe a little, but this is not the main thing).

For the entire period of the war, 54,606 fighters of all types were produced (from MiG-3 to La-7).

In total, the total need for duralumin is 55 thousand tons. Is it a lot or a little? Which definition should be used in this case: “as much as 55 thousand tons” or “only 55 thousand tons”? Real,

"professional" historians solved this question simply - with the help of shamanic howls about "history that gave us little time" and Stalin, who could not "postpone the start of the war." We will go the other way. Let's just compare this figure with the total volume of aluminum production and lend-lease deliveries.

Until very recently, the figures for the production of non-ferrous metals in the Soviet Union were classified. Modern researchers give estimates of aluminum production in the USSR from 1941 to 1945 inclusive in the range from 250 to 330 thousand tons. More clarity on allied supplies. From North America (USA plus Canada), the USSR received 290 thousand tons, and even England, choking from a lack of raw materials, threw in a "miserable" 35 thousand tons. Total: at least 575 thousand tons of aluminum. Least. And for all the fighters - if you make them from duralumin - you need only 55 thousand tons. Less than one tenth of the total resource! Taking the DB-3f bomber for "three fighters", and the "Pe-2" for "two fighters" (with such a gap between the resource and the need

the accuracy of the calculation no longer matters), we get another 34,648 "conditional fighters", that is, another 35 thousand tons of aluminum. Only 90 thousand tons. Even if we double this figure (to cover all possible errors in our very rough estimate), we still get a figure of one third of the resource of aluminum. Where did the acute deficit come from? And one more small example to illustrate how much

duralumin was in the USSR. Shakhurin in his memoirs in passing, in one paragraph,

recalls the following incident:

> ... Once I was informed that 12 thousand tons of duralumin were unloaded near one of the Siberian plants. It turned out that the cargo arrived at the place, and from there, without our knowledge, it was shipped to the nearest plant ... It was necessary to urgently transport these “surpluses” to all those in need.
>
> But, as a joke, to urgently transport 12 thousand tons of duralumin to different parts of the
>
> country! Workers loaded aluminum after hours...
> Local party and Soviet organizations helped ...

That's it. 12 thousand tons. 600 wagons were unloaded by mistake "near one of the Siberian plants." You had to have a lot of it to be so wrong. At the rate of 1 ton per airframe, this amount could be more than enough for the production of 9918 all-metal fighters - that is how many "glued" ones were actually produced in 1942. At the same time, mind you, we have never asked the

question of whether it was necessary to make all these 55 thousand fighter aircraft at all? No need to rush to answer, no need to shout “Everything for the front, everything for victory!” Half of these planes did not see the front. It's not a crude joke, it's a statistic. We open the official statistical collection, ed. Krivosheeva (35) on page 350. We read. As of January 1, 1943, the Red Army had 21.9 thousand combat aircraft. So it is written - "combat". Not educational and not postal. Of these,

12.3 thousand are in the active army. 56%, i.e.

slightly more than half. As of January 1, 1944, there were 32,500 combat aircraft in the Red Army. Of these, 13.4 thousand are in the active army. This is already noticeably less than half (41%). Exactly half of the combat aircraft is in the army on January 1, 1945 - 21.5 thousand out of 43.3 thousand combat aircraft. Of these 43 thousand, 24.2 thousand are fighters. Where was it possible to get such a number of minimally trained pilots? Was it necessary to glue tens of thousands of plywood wings when the Luftwaffe kept no more than 400-500 fighters at a time on the entire Eastern Front? As a very bold (even frightening even to me) hypothesis, it is

worth thinking about the fact that Comrade Stalin thought about a future World War III even before the end of World War II. Since it was not possible to rely on the supply of American aluminum in that future war (and even at the stage of preparation for it), Lend-Lease aluminum was accumulated in advance. Stored in piles of 12 thousand tons "at one of the Siberian plants." And the planes for finishing off half-dead Germany were glued on the knee of plywood.

Another reason for the rejection of civilized technologies is extremely clear, and "His Majesty's Plan" does not require any conspiracy theories. An insatiable idol of the Soviet era. The transition from plywood to duralumin aircraft construction meant a complete change in technology, equipment, and tooling. In a situation where every day it was necessary to report to the "party and the government" on the percentage of the implementation of the plan, they were afraid to even think about something like that. That is why - and not at all because of the imaginary shortage of duralumin - the whole war was “driven by a plan” on aircraft in which the plywood wing skin came off in flight, the engines “fired with connecting rods”, the cockpit canopy flooded with oil could not be opened by any effort, the heat in the cockpit "La-5" / "La-7" reached 60 degrees, and the red-hot control stick burned the pilot's hand even through a glove ...

Naturally, someone had to answer for all this. Stalin could not plead guilty to himself, so in 1946, as a reward for the titanic - without any quotes - work, the Owner sent his people's commissar of the aviation industry to the camp for 10 years. Do you know why? For the systematic release of low-quality products and postscripts. Together with Shakhurin to the torture cellar, and then to

Commander-in-Chief of Aviation Novikov, who "sabotagely accepted wreckingly assembled aircraft from the NKAP" for a long time, also went to the prison cell. So sad was the outcome of the “great labor battle” invisible to prying eyes ...

Part 3 WAR

Chapter 19
RIGHT TO LIFE

The war for the Soviet Air Force began much earlier than that Sunday morning, when German bombs rained down on "peacefully sleeping airfields." The heaviest losses, and in the most important - command - link, Soviet aviation suffered already in May - June 1941. And to this day there is no clear explanation of why it was at the beginning of the summer of 1941 that a new wave of destructive repressions covered the leadership of military aviation and the military industry. It is completely incomprehensible why the new, young generals, whom he himself placed in all key positions just a few years (or even months) ago, did not please the Master this time. The so-called "pilot conspiracy" is striking in its irrationality, even against the background of other absurd and bloody deeds of the Stalinist regime.

I. Bunich in his well-known historical chronicle "Operation Thunderstorm" tried to come up with an action-packed detective version of what happened. Allegedly, Soviet intelligence agents at the headquarters of the Luftwaffe discovered a stream of secret information coming to the enemy from some traitors in the leadership of the Soviet Air Force. The enraged Stalin allegedly demanded to urgently find and neutralize the traitor, and this is where it all started ... The author of this book must admit that he had a great desire to "draw" an even more exciting intrigue, that is, to connect the "aviators' plot" with catastrophic defeat of the aviation of the western military districts in June 1941. Alas, nothing of the kind to offer the reader failed. Everything was boring, scary and vile. No conspiracy "Chekists" found. Nothing, no evidence of treason or even trivial espionage was found. The leaders of the Soviet Air Force, the heroes of air battles in the sky of Madrid and Khalkhin Gol, were killed just like that. More precisely, for the reasons that Stalin took with him to the grave. Owls. the secret certificate that L. Beria submitted

to Stalin on January 29, 1942 (Archive of the President of the Russian Federation, fund No. 3, inventory No. 24, case No. 378, l. 196–211), contained a list of 46 arrested persons who were not

managed to shoot by that time. Next to each name, the essence of the charges brought was extremely briefly stated. This document immediately and unconditionally removes the sacramental question: “did Stalin himself believe in the guilt of his victims?” In this case, this question is inappropriate - there is simply nothing there that even the most gullible person could believe. The jealous and ardent Moor Othello

was presented with "material evidence" - a handkerchief. And although the conclusions from this scarf were absurd, you can understand the jealous - he was passionately in love with his Desdemona, that is, in legal terms, "was in a state of passion." There is nothing concrete in the "charges" brought against the arrested generals, there is not a single fact, not a single document, not a single real event, there is no motive for committing such a terrible crime, there are no accomplices "on the other side of the front" to whom the imaginary "spies" passed secret intelligence. There is nothing but stereotyped phrases: ***“he is convicted as a participant in an anti-Soviet military conspiracy by the testimony”*** of Petrov and Sidorov. Next to the name of the conditional "Sidorov" will be written: "Convicted by the testimony of Ivanov and Petrov." Moreover, quite often there are notes: “they refused to testify.” Next to three names: the head of the Air Force Research Institute A.I. Filin, Commander of the Air Force of the Far Eastern Front K.M. Gusev, Chief of Staff of the Air Force of the Southwestern Front N.A. Laskin - there are two short words: "did not confess." But even from the point of view of the medieval "jurisprudence" of Comrade Vyshinsky, the absence of a confession - in the absence of other evidence - testified to the innocence of the accused

What could Comrade Stalin "believe" here? In the testimony of those who "confessed"? Could Stalin not understand the price of these "confessions" if he personally authorized the use of "measures of physical coercion" and did not even disdain to personally inform the lower party authorities about this (the well-known cipher telegram of the Central Committee of the All-Union Communist Party of Bolsheviks of 01/10/1939, in which the first local secretaries of party organizations were explained that ***“the use of physical force in the practice of the NKVD was allowed since 1937 with the permission of the Central Committee of the CPSU.***

... The Central Committee of the All-Union Communist Party believes that the method of physical influence must be applied in the future…”

Also striking is the obvious obsoleteness of the accusations, in which the doomed "confess" or even do not confess (although this does not change anything!) Apparently, the "Chekists" were too lazy to come up with something new and relevant, related to the World War, Hitler, Churchill, etc. there are people who were shot many years ago! But, and this is the strangest thing, for all its stereotyped standardity, the “aviator case” lasted a very long time: if no more than three weeks passed from arrest to execution of Tukhachevsky and his “accomplices”, then in this case from arrest in May 41 to execution On February 23, 1942, ten months had passed. It remains to state once again that not all of Stalin's actions can be understood and explained from the standpoint of normal human

logic...

Without even trying to lift the veil of secrecy over this tragic story, we will give only a simple and impartial chronology of events. However, even chronology cannot be "simple" here - for what should be considered the starting point? Repressions, now subsiding, now flaring up again, did not stop for a single day. In particular, the extermination of the leadership of the People's Commissariat of Ammunition (in the summer of 1941 this "case" will inexplicably intertwine with the "aviators' case") began in the late autumn of 1940. On October 23 B.A. was arrested. Efremov, born in 1903, member of the CPSU (b) since 1930, head of the 2nd Main Directorate of the People's Commissariat of Ammunition of the USSR. Then, on December 11–12, three deputy people's commissars for ammunition were arrested: M.S. Inyashkin, V.Ya. Shibanov and N.M. Khrenkov. The People's Commissar of Ammunition himself was still at large (probably, quotation marks are needed here) and continued to manage his rapidly growing industry.

The beginning of the "aviators' case" is traditionally associated with a meeting of the Main Military Council (GVS), which considered the issue of accidents in the Soviet Air Force. With the light hand of one respected admiral, such a legend went for a walk:

During the report of the Secretary of the Central Committee Malenkov, the commander-in-chief VVS Rychagov took it and blurted out from the spot:

- You make us fly on coffins, and therefore the accident rate is high!

Stalin, who was pacing along the rows of armchairs, froze for a moment, changed his face, and with a quick step approaching Rychagov, said: "You shouldn't have said that." And having said this once more, he closed the meeting. A week later, on April 9, 1941, by the Decree of the Politburo of the Central Committee of the All-Union Communist Party of Bolsheviks, Rychagov was removed from his post and doomed to death.

After the minutes of the meetings of the GVS (all the minutes, according to the compilers of the collection) were published in 2004, it became clear that the entire scene described, as well as Stalin's participation in the meeting of the GVS, were fictitious. In the period under review, there were four meetings of the GVS (12/11/40, 04/15/41, 04/22/41, 05/08/41), and Rychagov was not even mentioned there. On the other hand, the issue of accidents in Air Force units was indeed discussed in the Politburo. And, it's not the first time. In April 1941, numerous accidents that occurred in long-range aviation units became another reason for discussion. The result of this discussion was the Resolution of the Security Council of the Central Committee of the All-Union Communist Party of Bolsheviks of April 9, 1941 (Minutes No. 0). The blame was placed on four people: People's Commissar of Defense Tymoshenko, Head of the Red Army Air Force Rychagov, Head of Long-Range Aviation Proskurov, Head of Operational Flights Mironov. The most severe punishment was provided for Mironov: ***"to be tried for an obviously criminal order that violates the elementary rules of flight service ..."*** Further, the Politburo "offered" to remove Proskurov from his post and bring him to trial. As for Rychagov, he was also removed from his post ***(“remove comrade Rychagov from the post of head of the Red Army Air Force and from the post of deputy people’s commissar of defense, as an undisciplined and failed head of the Air Force ...” People’s Commissar Timoshenko was reprimanded for the fact*** that ***“in In his report of April 8, 1941, he, in fact, helps Comrade Rychagov to hide the shortcomings and ulcers that take place in the Red Army Air Force.***

That, in fact, is all. By the standards of the time, everyone got off pretty lightly. No instructions were given through the NKGB. There is no talk of any "doom to death" yet. On April 12, 1941,

order No. 0022 of the NCO of the USSR was issued. In the order, essentially duplicating the text of the Politburo, a very significant addition appeared: “ ***According to the request of Lieutenant General of Aviation Comrade Rychagov, send him to study at the Academy of the General Staff of the Red Army.”*** Moreover - and this is very important to note - already on May 4, it has somewhat "cooled down". The Politburo makes the following decision (protocol No. 32, paragraph 47): ***“to propose to the Prosecutor of the USSR, Comrade Bochkov, in relation to Lieutenant General of Aviation Proskurov and Colonel Mironov, to consider their case in court and, bearing in mind their merits in the Red Army, limit themselves to public censure ... ".*** (RGASPI. F. 17. Op. Z.D. 1039. L. 12). Usually, Soviet prosecutors agreed with the "proposals" of the Politburo, and after the "public censure" the incident seemed to be considered settled.

Concluding the "emergency version" of the reason for the extermination of the leadership of the Red Army Air Force, it is worth mentioning the letter with which Proskurov addressed to Stalin on April 21, 1941. (118) The first sentence of the letter reads as follows: ***"I consider it my Party duty to report some considerations on the merits of preparing aviation for war."*** Note that we are not asking for a pardon from the convict, but a letter from a communist addressed to the leader of the party (in terms of another era, a letter from a nobleman to the king, that is, “first among equals”). Further, after all the praises to the party and its leader personally, which are obligatory in such a case, the essence of “considerations” begins. Politely, but persistently, Proskurov explains to Stalin that the main thing in military aviation is the level of combat training of crews, and not at all the amount of equipment destroyed du

> ... experts believe that under the existing rules for the flight service in the Air Force, they will not be able to fulfill the task assigned to them - the restrictions are too great. They visited several units of the Air Force and made sure that the fear of the commanders of the responsibility for flights in difficult weather conditions is too great and

at night... The task is clear - to break this fear by all means... Over the past 4–5 months... intensive work has been carried out to improve the quality of flight training of the Aviation Security Division, and by mid-April this year. 612 crews fly at night (30%), 420 crews (20%) fly in bad weather conditions, 963 crews (50%) are trained to fly in bad weather conditions. As you can see, the quality of training has grown more than TWICE. This is a turning point in the quality training of DB aviation

are accompanied accidents quantity flight
by a large number of accidents ... A significant part of the accidents are due to poor organization and discipline, as it is rightly indicated in the order of the IKO No. Air Force. Serious warnings and punishments, written down in NPO orders, will force the command staff of the Air Force to catch up, but at the same time they can increase the fear of accidents and thereby slow down the pace of quality training. Dear comrade. Stalin, in our history of aviation there was no case when a commander would be tried for poor preparation of a unit subordinate to him. Therefore, people involuntarily choose the lesser of two evils for themselves and reason like this: “I will be scolded for

shortcomings in combat training, well, in the worst case, they will be demoted by a step in my position, and I will go to court for accidents and disasters.”

Unfortunately, commanders who think this way are not isolated. Such sentiments exist and will continue to exist until the same demands and responsibility are made for the combat readiness of the subordinate unit as for the accident rate ...

Let us repeat once again that this letter was written on April 21st. On May 4, the Politburo recalls Proskurov's merits and explains to the prosecutor that the verdict should not go beyond "public censure." All this suggests that

that "dear comrade. Stalin" this time agreed with the sound logic of Proskurov's letter. No ***"coffins",*** no ***"You shouldn't say that"*** is found. By the beginning of the war, Proskurov, still in the same high rank of lieutenant general, was in command of the Air Force of the 7th Army (Karelia). For a lieutenant general, this, of course, is a demotion, but nothing more. On May 10, 1941, the Politburo of the Central Committee of the All-Union Communist Party of

Bolsheviks again returns to discussing the situation in the Air Force units. The combat training of the Air Forces of the Oryol and Moscow military districts was recognized as unsatisfactory. In pursuance of the decision of the Security Council of the Central Committee and the Main Military Forces, on May 15, an order of the NKO of the USSR No. 0026 was issued on dismissal "for unsatisfactory leadership and disruption of combat training in the Air Force units during the winter period of 1940-1941." commanders of the Air Force of the Moscow Military District (P.I. Pumpur) and the Ordnance Military District (P.A. Kotov), commanders of a number of air divisions and regiments. And these decisions haven't condemned anyone to death yet. P.A. Kotov was transferred to the military academy, where he successfully served further.

The first arrest, which undoubtedly should be attributed to the “Aviator Case”, occurs on May 18, 1941. Colonel G.M. Shevchenko, born in 1894, member of the All-Union Communist Party of Bolsheviks since 1926. There is no need to guess about the reasons for the arrest: the NPC of aviation weapons is the place where naive hopes (or, more often, advertising statements) about the combat potential of the next "wonder weapon" came into contact with the harsh prose of life (in particular, in In 1942, it was in the Air Force Research Institute that it was found out that to destroy one German light tank, as many as 12 sorties of the Il-2 attack aircraft were needed. Working conscientiously in such a post, Colonel Shevchenko could not help but make numerous, influential enemies. Just as deadly was the position of the head of the Air Force Research Institute. The former head of the Air Force Research Institute, brigade commander N.N. Bazhanov, was shot in 1938. The new head of the Air Force Research Institute, a pilot known throughout the country for a number of long-distance flights, a highly qualified engineer, holder of two Orders of Lenin, Major General A.I. Filin at first enjoyed the great confidence of Stalin himself. People's Commissar of Aviation Industry Shakhurin writes in his memoirs:

> Once, after discussing some aviation issue with Filin, Stalin invited him to dinner. I still remember Alexander Ivanovich's handsome, pale face, slender figure, attentive blue eyes and smile. At dinner, Stalin asked Filin about flight work and airplanes. He was interested in health ... Then, having asked what kind of fruits Filin liked, he ordered to bring fruit and several bottles of wine to him in the car. Looked at him all the time affably and friendly. A few weeks later, one designer had to report: “Comrade Stalin, Filin is slowing
>
> down the testing of my fighter, making all sorts of claims,” and a sharp turn took place in the fate of Filin. — How so? Stalin asked. - Yes, that indicates flaws, and I argue that the plane is good. Beria, who was present,
>
> muttered something to himself.
>
> It was possible to understand only one word: "Bastard ..." And a few days
>
> later it became known that Filin was arrested ...

Shakhurin did not like Beria, and it is understandable - under Beria Shakhurin and got his 10 years.

In addition, Shakhurin's memoirs were written at a time when the next next "truth" was established: everyone was white and fluffy, only Beria was a "bloody satrap".

Nevertheless, it is impossible to draw an unambiguous conclusion from Shakhurin's memoirs - to whom exactly, to the head of the Air Force Research Institute or to "one designer", such a dissonant assessment of Beria refers. In any case, it is absolutely certain that from February 3 to July 20, 1941, the NKGB (which was engaged in the search for "high treason") and the NKVD, which was led by Beria, were two different people's commissariats, so for the criminal fabrication of the "case of aviators." Beria answers no more (although, of course, no less) than any other of Stalin's "satraps." There is no doubt that there

were exactly two “fighter designers” who could complain about the general to whom Stalin personally sends wine and fruit “from the royal table”: Mikoyan

or Yakovlev. The document preserved in the so-called “Special Folders” of the Politburo of the Central Committee of the All-Union Communist Party of Bolsheviks (RGASPI, f. 17, op. 162, d. 34, l. 150) apparently makes it possible to reduce this list to one “designer”:

> ... The head of the Air Force Research Institute, Filin, misled the Central Committee of the All-Union Communist Party of Bolsheviks and the Council of People's Commissars of the USSR ... With his conclusion that the MiG-3 aircraft did not pass the test in range and with his demand for the need to increase the range by 140–180 km (a rare example of ***hypocrisy ; unsubstantiated demands to increase the range of all fighters to 1000 km came personally and specifically from Comrade Stalin.*** - M.S.) Filin pushed for a further increase in the capacity of gas tanks, i.e., to an even greater overweight of the MiG-3 aircraft and a sharp deterioration in its flight properties ...

The decision to remove Filin from the post of head of the Air Force Research Institute was adopted by the Politburo of the Central Committee on May 6, 1941. The exact date of his arrest is unknown. The decision of the Council of People's Commissars on the Air Force Research Institute was issued on May 27, the order of the NPO to bring the head of the Air Force Research Institute to trial by a military tribunal was issued on May 31, but Beria's memorandum, drawn up in January 1942, indicated May 23.

On May 24, 1941, one of the most important events in the history of the Soviet Union took place. On the evening of that day (from 6:50 pm to 9:20 pm), a meeting of the top command staff of the Armed Forces was held in Stalin's office. Present: People's Commissar of Defense Timoshenko, Chief of the General Staff Zhukov, Chief of the Operations Department of the General Staff Vatutin, the new (after Rychagov) Air Force Commander Zhigarev, the command of the five western military districts in full force. It is noteworthy that out of the entire "inner circle" of party leaders, who visit the Boss's office almost daily, only Molotov was allowed to attend this meeting! After the military left, another man entered the office, to whom Stalin and Molotov devoted a whole hour of their time. It was a little-known (both then and now) to the general public, the head of the department of the Balkan countries of the People's Commissariat for Foreign Affairs, Comrade Lavrishchev. That's all we know about it to this day.

event. And one more phrase from Vasilevsky's interview: ***"A few weeks before the attack on us by fascist Germany, unfortunately I can't name the exact date, all the documentation on the district operational plans was handed over by the General Staff to the commands and headquarters of the corresponding military districts ..." Nor the minutes of the meeting ,*** neither his agenda has been published. Although, in fact, 64 years have passed since that day, and all the deadlines for declassification established by the law of the Russian Federation have long expired ...

It is difficult to say whether this is a coincidence, but after May 24 arrests came one after another. On May 30,

1941 E.G. was arrested. Shakht, born in 1904, member of the All-Union Communist Party of Bolsheviks since 1926, major general of aviation, assistant commander of the Air Force of the Oryol Military District. Ernst Genrikhovich, a German by nationality, was born in Switzerland. He came to the "homeland of the proletarians of the whole world", at the age of 22 he joined the Bolshevik Party. He trained as a fighter pilot, fought in the skies of Spain, and was awarded the title of Hero of the Soviet Union for his personal courage and skill in

air combat. On the same day, May 30, 1941, People's Commissar of Ammunition I.P. was arrested. Sergeev and his

deputy A.K. Khodyakov. On May 31, 1941, P.I. was arrested. Pumpur, born in 1900, member of the All-Union Communist Party of Bolsheviks since 1919, lieutenant general of aviation, head of the Combat Training Directorate of the Red Army Air Force, then commander of the Air Force of the Moscow Military District. During the war in Spain, Pumpur, the leader of a group of Soviet fighter pilots, was among the very first to be awarded the title of Hero of the Soviet Union,

awarded two Orders of Lenin and the Order of the Red Banner. On June 1, 1941, divisional commander N.N. was arrested. Vasilchenko, born in 1896, member

of the CPSU(b) since 1918, assistant inspector general of the Red Army Air Force. On June 3, 1941, important organizational decisions were made. The fact is that since the spring of 1941, military counterintelligence was organizationally part of the People's Commissariat of Defense (3rd Directorate of the NPO). This created certain difficulties and delays in the fabrication of "cases". Therefore, on June 3, the Politburo adopts the following Resolution: ***"To satisfy the request of the NKGB that, before the hearing of the Pumpur case in c***

investigations in the NKGB. Similar decisions were made later on other arrested persons, thus the “Chekists” were given all the conditions for intensive work.

On June 4, 1941, P.P. was arrested. Yusupov, born in 1894, non-partisan, major general of aviation, deputy chief of staff of the Red Army Air Force.

On the same day, June 4, 1941, two heads of departments of the Scientific Testing Range for Aviation Weapons of the Red Army Air Force were arrested: S.G. Onisko, born in 1903, member of the All-Union Communist Party of Bolsheviks since 1923 and V.Ya. Tsilov, born in 1896, member of the All-Union Communist Party of Bolsheviks since 1918, military engineer of the 1st rank.

On June 7, 1941, G.M. was arrested. Stern, born in 1900, member of the All-Union Communist Party of Bolsheviks since 1919, colonel general, head of the USSR Air Defense Directorate. Stern has never been a pilot, he is a regular military man, during the war years in Spain he was the Chief Military Adviser to the Republican government, then he was the chief of staff and commander of the Far Eastern Front. Hero of the Soviet Union, awarded two orders of Lenin, three orders of the Red Banner, the Order of the Red Star. On the same day, June 7,

People's Commissar for Armaments B.L. was arrested. Vannikov (future head of the Soviet Atomic Project).

On the same day, June 7, A.A. Levin, born in 1896, major general of aviation, deputy commander of the Air Force of the Leningrad Military District, was arrested. On

June 8, 1941, Ya.V. was arrested. Smushkevich, born in 1902, member of the All-Union Communist Party of Bolsheviks since 1918, lieutenant general of aviation, in 1939–1941. Commander-in-Chief of the Red Army Air Force, then - Inspector General of the Red Army Air Force, Assistant Chief of the General Staff for the Air Force. An outstanding fighter pilot and commander, he fought in the skies of Spain and Khalkhin Gol, for exceptional courage and skill he was twice awarded the title of Hero of the Soviet Union (there were only five twice Heroes

in the USSR before the start of the war). On June 9, 1941 A.D. was arrested. Loktionov, born in 1893, captain of the old Russian army, member of the All-Union Communist Party of Bolsheviks since 1921, colonel general. Until 1933, he commanded rifle divisions and the 4th rifle corps. In 1933-1937, Loktionov was assistant commander of the Belarusian and Kharkov military districts for the A

Commander of the Central Asian Military District. In 1938–1940 he is Commander-in-Chief of the Air Force of the Red Army, Deputy People's Commissar of Defense of the USSR, member of the Central Committee of the All-Union Communist Party of Bolsheviks, member of the Main Military Council. The last position before the arrest was the commander of the Baltic Special Military District (until February 1941, then - "at the disposal of the NPO"). He was awarded two Orders of the Red Banner, the Order of

the Red Star. On June 17, 1941, K.M. was arrested. Gusev, born in 1906, member of the All-Union Communist Party of Bolsheviks since 1930, lieutenant general of aviation, commander of the Air Force of the Belarusian OVO, then the Air Force of the Far Eastern Front.

On June 19, 1941, P.A. was arrested. Alekseev, born in 1888, member of the All-Union Communist Party of Bolsheviks since 1920, lieutenant general of aviation, head of the Main Directorate of Aviation Supply of the Red Army, then assistant head of the Air Force of the Volga Military District.

On Sunday, June 22, well-known events began, but they in no way stopped or slowed down the wave of arrests. Moreover, the deadly wave began to approach the very top of the country's military leadership. On June 24, 1941, the Hero of the Soviet Union, General of the Army, Deputy People's

Commissar of Defense (before that - Chief of the General Staff of the Red Army) K.A. was arrested. Meretskov. Just three days before, by decision of the Politburo, he was appointed representative of the Supreme Command of the Red Army on the Northern Front, arrived in Leningrad on June 22 and during this long day led the troops of the district (front), since the commander of the Northern Front was in the North - in Murmansk. On June 23, Meretskov was suddenly summoned to Moscow and arrested (according to one version, right in Stalin's waiting room).

On the same day, June 24, 1941, P.V. was arrested. Rychagov, born in 1911, lieutenant general of aviation. Rychagov became

a fighter pilot at the age of 20. In October 1936, as part of the first group of Soviet pilots, he arrived in Spain, until February 1937, the I-15 biplane squadron, commanded by Rychagov, shot down 40 Nazi aircraft, of which 6 aircraft were personally shot down by the squadron commander. On December 31, 1936, the brave pilot and talented commander was awarded the title of Hero of the Soviet Union. From Spain, Rychagov ends up in China, where, already in the position of commander of the entire Soviet air group, he fights against the Japanese invaders. On March 8, 1938 he was awarded the Order of the Red

Banner, and in April he was appointed commander of the aviation of the Primorsky Group of the Special Red Banner Far Eastern Army. For the successful leadership of the Air Force in the battles near Lake Khasan in 1938 he was awarded the second Order of the Red Banner. In the same year, Rychagov was admitted to the party by the decision of the Central Committee of the All-Union Communist Party of Bolsheviks, without undergoing candidate experience. During the Finnish War, he commanded the Air Force of the 9th Army - the fourth war and the third Order of the Red Banner. From June 1940 he was deputy, and from August 1940 - commander-in-chief of the Red Army Air Force.

On June 26, 1941, the extermination of the leadership of the People's Commissariat of Ammunition continued. Arrested D.A. Irlin, head of the planning department of the People's Commissariat and G.A. Tolstov, head of the supply department of the People's Commissariat

of Ammunition. On the same day, June 26, 1941, A.P. was arrested. Ionov, born in 1894, member of the All-Union Communist Party of Bolsheviks since 1938, major general of aviation, commander of the Air Force of the North-

Western Front (Baltic OVO). On June 27, 1941, P.S. was arrested. Volodin, born in 1900, Major General of Aviation. The first time Volodin (at that time - the chief of staff of the Air Force of the 1st Red Banner Army) was arrested in 1938, then, as part of the "Beria thaw", he was released into the wild in 1939. From April 11, 1941, until the day of his arrest, he was chief of staff of the Red Army Air Force. On the same day, June 27,

1941, I.I. Proskurov, born in 1907, member of the CPSU (b) since 1927, lieutenant general of aviation. The track record of General Proskurov was unusual even by the standards of that incredible time. In 1931, from the last year of the Kharkov Institute of Electrification, Proskurov was drafted into the Red Army, where he graduated from the 7th flight school and became a heavy bomber crew commander. Then Proskurov serves as an instructor pilot at the elite Air Force Academy. Zhukovsky, commander of a bomber squadron. Among the first, Proskurov arrived in Spain, where he was at the helm of the "SB" fighting the Francoists. In 1937 he was awarded the title Hero of the Soviet Union. After Spain - special commander of the aviation of the Far Eastern Front. Awarded the Order of Lenin, two Orders of the Red Banner. On April 14, 1939, a military pilot and aviation commander became the head of the Intelligence Directorate and to his position) deputy people's armies (according destination commissar

defense. On July 27, 1941 (exactly one year before his arrest), Proskurov again returned to aviation, where he commanded the Air Force of the Far Eastern Front, later - assistant commander-in-chief of the Air Force for long-range aviation. At the time of his arrest, he was commander of the Air Force of the 7th Army.

On the same day, June 27, 1941, E.S. was arrested. Ptukhin, born in 1902, member of the All-Union Communist Party of Bolsheviks since 1918, lieutenant general of aviation, commander of the Air Force of the Southwestern Front (Kyiv OVO). He graduated from the military aviation school in 1929 as a fighter pilot and commander of a fighter aviation brigade. In Spain, he was an adviser to the Republican Air Force, after returning to the Union in 1938, he was appointed commander of the Air Force of the Leningrad Military District. During the Finnish war - the commander of the Air Force of the main, North-Western Front. Hero of the Soviet Union, awarded two Orders of Lenin, the Order of the Red Banner and the Order of the Red Star. In January 1941, Ptukhin was appointed head of the Main Directorate of Air Defense of the Red Army, and then - commander of the Air Force of the Kyiv Special Military District.

On June 28, 1941, F.K. was arrested. Arzhenukhin, born in 1902, member of the CPSU (b) since 1922, lieutenant general of aviation. In 1927 he graduated from the Borisoglebsk school of military pilots, in 1931 he graduated from the advanced training courses for command personnel at the Air Force Academy. Squadron commander, senior inspector for the flight service of the Air Force Inspectorate, chief of staff of the 4th bomber air corps. Assistant military attaché in Spain, 1938–1940 chief of staff of the Air Force of the Red Army, then - head of the Military Academy of command and navigators of the Air Force. He was awarded the Order of Lenin, the Order of the Red Banner. On July 8, 1941 A.I. was arrested. Tayursky, born in

1900, member of the All-Union Communist Party of Bolsheviks since 1926, Major General of Aviation. Deputy Commander of the Air Force of the Western Front (Western OVO), after the death of the Commander of the Air Force of the Front, took over his duties.

On July 12, 1941, N.A. was arrested. Laskin, born in 1894, non-partisan, major general of aviation, chief of staff of the Air Force of the South Western Front. At the

beginning of July 1941 (from 4.07 to 10.07) a large group of generals from the command of the Western and Northwestern fronts was arrested (commander of the Western Front Pavlov, chief of staff Klimovskikh, head of communications of the front Grigoriev,

Chief of Artillery of the Klich Front, Commander of the 4th Army of the Western Front Korobkov, Commander of the 14th Mechanized Corps Oborin, Chief of Staff of the Northwestern Front Klenov). Among the arrested generals was the commander of the 9th SAD (mixed air division) of the Western Front, a fighter pilot, a participant in the war in Spain, Hero of the Soviet Union S.A. Chernykh. Traditionally (if only this term is applicable to events about which the traditional Soviet historiography tried to remain silent), this series of arrests is associated with Stalin's reaction to the catastrophic defeat of the Western Front. Judging by the documents published over the past 10–15 years, there is nothing in this version except for the purely psychological effect of replacing the concepts ***“after”*** with ***“due to the fact that***

What".

Arrest of Army General D.G. Pavlov was most likely connected precisely with the “military conspiracy”, and not with the fact of the defeat of the Western Front. On June 30, 1941, Pavlov was removed from his post, summoned to Moscow, “scrubbed” there properly, but after that (all in the same rank of army general!) Was sent to fight on the same Western Front. There is information that Pavlov was appointed deputy front commander for armored forces. Not such a big demotion - if we take into account the fact that the people's commissar of defense himself, Marshal Timoshenko, was appointed the new commander of the front. Pavlov was arrested on July 4, right on the road, near the city of Dovsk (30-40 km from the front line, which then passed near the city of Rogachev). From the protocols of interrogations it clearly follows that "conspiratorial ties with Uborevich and Meretskov" were of interest to the "Chekists" much more than finding out the real reasons for the defeat of the Western Front. (119) At the trial, Pavlov refused the self-incrimination knocked out of him and was sentenced to ***dishonesty and the collapse of command and control of the troops.*** But, judging by the pressure of the "investigators", it was a completely different matter - the case of a conspiracy of the highest command staff of the Red Army. Nothing to do with the To execution behind ***"inaction authorities,*** investigation of the causes and the search for those responsible for the defeat of Soviet aviation at the beginning of the war is not in the "indictment" against the commanders of the Air Force of the western districts of Ionov,

Ptukhin, Tayursky, Laskin. They are exactly the same as those arrested before

June aviation generals - "convicted by the testimony" of Belov, Uritsky, Bergolts, Uborevich, who were shot in 1937-38. They are charged with ***"participation in the Right-Trotskyist conspiracy",*** espionage in favor of the almost non-existent France, ***"sabotage in airfield construction."*** They were recruited into "spies" who in 1938, and who (Ptukhin) and in 1935 ...

By the way, the fate of the commander of the Air Force of the Kyiv Regional Military District Ptukhin was decided even before the German invasion. Air Marshal A.A. Novikov (at that time - the commander of the Air Force of the LenVO) writes in his memoirs:

> ... On June 20, unexpectedly, by order of the people's commissar of defense, Marshal of the Soviet Union S.K. Tymoshenko was summoned to Moscow. On Saturday I returned to Leningrad and immediately telephoned the people's commissariat. General Zlobin, who was with the people's commissar for special assignments, said that I was being transferred to Kiev. Naturally, I immediately thought of General E.S. Ptukhin and inquired where he was being transferred. My question remained unanswered. Zlobin somehow hesitated and after a short pause replied that the issue of Ptukhin had not yet been resolved, and I should be at the marshal's at 9 o'clock in the morning on June 23, and hung up ...

(39)

Much is unclear in the circumstances of the suicide of the commander of the Air Force of the Western Front, Major General I.I. Koptsa. He shot himself in his office on June 22, 1941. The generally accepted version of the causes of suicide does not fit the most, in such a matter,

The main thing:

- personality traits of the deceased. Hero of the Soviet Union, holder of the Order of Lenin and the Order of the Red Banner, a participant in two wars (Spanish and Finnish), 34-year-old General Ivan Kopets was not a "former fighter pilot." Until the last day he remained a flying pilot. Marshal Skripko, in his memoirs, even notes with some disapproval that the district aviation commander spent most of his time at airfields that Kopets did not

he came in a ZIS, and flew in an I-16 fighter. Yes, and the title of Hero of the Soviet Union squadron commander I.I. Kopets received not as a gift "for the anniversary", but for personal courage shown in the sky of Madrid. For a person with such a biography and such a character, it would be

much more natural to commit suicide - if such an intention actually arose - in the air, in the cockpit of a combat aircraft, taking with him several enemies. The fighter aircraft was at the personal disposal of the Air Force commander. Everything falls into place if we only assume that the reason for the suicide was not at all the shock from the unsuccessful (which no one knew about at noon on the first day of the war!) The start of hostilities. Most likely, on June 22, 1941, they arrived for the front aviation commander. People with warm hearts arrived, "friends of the people." In this case, the only way to evade the "investigation" and the wrong court was only one bullet in the temple.

This version will not seem so extravagant if you carefully read two passages from the memoirs of G. Zakharov (at that time - the commander of the 43rd IAD of the Western Front):

> ... It was already dawn for a long time when the call came from the district aviation headquarters. It was, from memory, between five and six in the morning. The commander of the Air Force of the district called:
>
> We are being bombed. With Chernykh and Ganichev (commanders of the 9th GARDEN and 11th GARDEN) there is no connection.
>
> Kopets spoke in an even voice, and it seemed to me that he spoke too leisurely. I was silent. - Cover Minsk with two shelves. One -
>
> Baranovichi.
>
> Another one is Pukhovichi. It was
>
> an order. I answered properly when the order was understood and accepted. Didn't ask questions. Kopets was silent, although I thought he should say something else. But he only uttered one word: “Go ahead.”

... I immediately went to the district air force headquarters. In the corridor I met the chief of staff, Colonel S.A. Khudyakov ... I reported on everything that had been done during the day from the moment when I received the order from the commander by telephone. **In turn, he asked about the general situation.**

The situation was unclear. The aviation headquarters did not connections **have divisions *(emphasized by the author)*** located near the borders. Despite the far from complete information, one could assume that regiments still existed and were fighting near the border, but there was no connection with them, and, most importantly, it was impossible to gather everything into a fist and establish control ... On the evening of June 22, Khudyakov and I assumed that the Germans be able to delay. That, in any case, they will not go further than the Minsk fortified area ...

... After talking with Khudyakov, I went to the commander. Before leaving, just in case, he asked Khudyakov if Kopets was at home. Khudyakov seemed to nod, but something seemed strange to me in his silent answer. I resolutely moved along the corridor - Wait, - Khudyakov stopped me. I turned around. - Ivan

Kopets shot himself ...

(55)

The results of the great work carried out by the "chekists" for incomplete two months is amazing. Arrested:

- Deputy People's Commissar of Defense, former Chief of the General Staff of the Red Army

(Meretskov); - People's Commissar for

Armaments (Vannikov); - People's

Commissar of Ammunition (Sergeev); - three former commanders of the Red Army Air Force (Loktionov,

Smushkevich, Rychagov); - Head of the Main Directorate of Air

Defense of the USSR (Stern); - Assistant Commander-in-Chief of the Air Force for Long-Range (Proskurov);

- Chief of Staff of the Red Army Air Force and his deputy (Volodin and Yusupov);
- Commander of the Air Force of the Far Eastern Front (Gusev);
- Deputy Commander of the Air Force of the Leningrad Military District (Levin); - Chief of Staff of the North-Western Front (Klenov); - Commander of the Air Force of the North-Western Front (Ionov);
- Commander and Chief of Staff of the Western Front (Pavlov and Klimovskikh); - Commander of the Air Force of the Western Front (Tayursky);
- Commander of the Air Force and Chief of Staff of the Air Force of the South-Western Front (Ptukhin and Laskin);
- Commander of the Air Force of the Moscow Military District (Pumpur); - Assistant Commander of the Air Force of the Oryol Military District (Shakht); - Assistant Commander of the Air Force of the Volga Military District (Alekseev); - Head of the Military Academy of Command and Navigators of the Air Force (Arzhenukhin); - Head of the Air Force Research Institute (Filin); - Head of the NIP of aviation weapons (Shevchenko). The list is, of course, far from complete. It does not even include all those who have been named above. But there were dozens of other commanders, engineers, managers who were arrested and killed as part of the "aviators' case." And at the same time, a grandiose case of an “anti-Soviet conspiracy” was unfolding in the Main Artillery Directorate of the Red Army (deputy head of the Major General G.K. Savchenko, his deputies, designers of artillery systems were arrested and shot).

No one knows why, but Stalin pardoned the two doomed: Vannikov and Meretskov. On July 20,

Vannikov was returned to his workplace straight from the prison cell. The Chairman of the GKO, Stalin, personally wrote a paper with the following content: ***“The GKO certifies that Comrade Vannikov Boris Lvovich was temporarily arrested by the NKVD, as it has now become clear, due to a misunderstanding that Comrade Vannikov is currently considered to be fully rehabilitated. T. Vannikov, by the Decree of the Central Committee of the All-Union Communist Party of Bolsheviks and the Council of People's Commissars of the USSR, was appointed Deputy People's Commissar for Armaments and, by order of the State Defense Committee, must immediately begin wo***

A little later, Vannikov was appointed People's Commissar of Ammunition of the USSR. He served faithfully, and when the time came to create for Comrade Stalin "ammunition" of unprecedented destructive power - an atomic and then a hydrogen bomb, then Vannikov, who had previously been arrested by the NKVD, was entrusted with this business, "as it has now been clarified, due to a misunderstanding" . Vannikov coped with the task, brought the matter to the test of "ammunition" with a capacity of 50 megatons and became three times Hero of Socialist Labor.

Meretskov was released at the beginning of September 1941 and was immediately appointed representative of the Headquarters of the Supreme High Command in the North-Western and Karelian fronts, then commander of the 7th separate army.

After being tortured in the cellars of the NKGB, Meretskov's health was severely undermined (they say that the caring Stalin even allowed him to report while sitting), and Meretskov did not have the laurels of the outstanding commander found...

All the rest who survived and lived to see the execution were shot. Shot in "four calls". On July 22, 1941, exactly one month after the start of the war, Pavlov and his colleagues were shot. On October 16, 1941, the rest of the army generals arrested in July were shot; Chernykh also died in this group. On October 28, without any verdict, after the flight of the NKVD apparatus from Moscow to Kuibyshev, Loktionov, Stern, Arzhenukhin, Rychagov, Smushkevich, Proskurov, Savchenko, Volodin were shot on the outskirts of the "reserve capital".

The fate of the largest group of those arrested was decided on January 29, 1942. Stalin wrote on a memorandum from the People's Commissar of the NKVD Beria: ***"Shoot all those named on the list."*** February 13, 1942. A special meeting of the NKVD of the USSR issued a decree on execution. Young, thirty- and forty-year-old generals who signed up for the Bolshevik-Leninist Party at the age of 18-20 were shot on February 23, 1942. On the day of the Red Army. Many, many years have passed since then. In Kuibyshev, a park appeared

on the site of the execution site of the NKVD. Children's Park named after Gagarin. At the beginning of the "perestroika", a memorial stone was placed on the site of the future monument to the martyr heroes. They read speeches, invited relatives of the dead. buy stone halfway now

grass, however, the grass there will be born good, tall and beautiful.
With wildflowers.

Chapter 20 AT THE LINE

The Stalinist regime achieved the utmost mobilization of the raw materials, labor, and intellectual resources of a huge country, as a result of which the Soviet Union produced on the eve and during the war cyclopean mountains of weapons of all sorts and types. It would seem that it was precisely this achievement that the party “historians-propagandists” should have trumpeted at all corners, but everything was exactly the opposite: having invented an illusory “monolithic unity of society”, they stubbornly denied the real achievements of Comrade Stalin in creating the largest in numbers and armament armies of the world. The reason for such chronic "strabismus" is quite understandable - it was necessary to somehow explain the catastrophic defeat of this army at the

beginning of the war with Germany... enemy”, and any publication of real figures known to specialists for a long time is perceived as “scandalous” (if not “slanderous”). I hasten to warn you again - there will be no sensations in this chapter either. The reader will have to get acquainted with a brief overview of those facts and documents that were declassified and introduced into open scientific circulation at least 10-15 years ago. (3, 4, 6, 9, 10, 11, 16, 23, 35, 61, 68)

The war unfolds in time and space. This - so trivial and boring - circumstance opens up enormous opportunities for shameless juggling of facts. What is "air force"? What does "number of

combat aircraft" mean? Number on what day? Or for what period? Number where: in the whole country? or in the grouping that was deployed in a particular theater? And what is "combat aircraft"? Are these fighters and bombers in combat units? Or all (including flight schools and test sites) fighters and

bombers? Or all aircraft of any type, which, according to the statements, are on the balance sheet of the Air Force? Or in general, all flying objects with identification marks (red star or black cross) on the wings? Thus, any assessment of the balance of power of the parties

must begin with a clear definition of terms and methods of calculation. As you know, combat aircraft do not fly in flocks, and military aviation does not consist of aircraft, but of units and formations. It is the number of air units deployed in the theater and the number of crews in them that determines what should be called "aviation strength". The quantity of "consumables" (i.e. aircraft) should also be taken into account, but only as additional information. We will immediately explain to the incredulous reader who is expecting a “trick” that such a technique will lead not to an increase, but to a significant decrease in the estimate of the number of Soviet aviation (on the eve of the war, many fighter regiments of the Soviet Air Force had one and a half to two times more aircraft than pilots).

Calculations are further complicated by the fact that the units and formations of the Luftwaffe and the Soviet Air Force had a different structure and strength. The main tactical unit of Soviet aviation was an aviation regiment. Before the war, according to the current staffing table, the Soviet air regiment consisted of five squadrons of 12 crews each and a command level, a total of 62-64 crews. Fighter (IAP), bomber (BAP), assault (SHAP) and reconnaissance (RAP) air regiments were formed in the Soviet Air Force. Sometimes the name of the bomber regiments indicated their functional purpose: long-range bomber (DBAP), high-speed bomber (SBAP). Several regiments (from 3 to 5) united (IAD), bomber (BAD), mixed (SAD). Assault air regiments on the eve of the war were part of the SADs. Reconnaissance air regiments, as a rule, were not part of air divisions, reporting directly to the command of the fronts (one or two RAPs per front / district).

The aviation of the Navy had its own specific structure. There were no air divisions, two regiments were combined into an air brigade (fighter - IABR, bomber - BABR); along with the air regiments, there were many separate air squadrons. Was and

such an extremely rare structure in "land aviation" as a SAP (a mixed air regiment, which included fighter, bomber and assault squadrons). Another feature of naval aviation was the presence of mine-torpedo aviation regiments (MTAP), which were a bomber regiment with aircraft equipped for the use of aviation torpedoes and mines, and specially trained crews. As for the fighter and bomber units and units of the Navy Air Force, they were armed with conventional, "land" aircraft: "I-16", "I-153", "MiG-3", "DB-3f", "SB ", “Ar-2”. It would not be an exaggeration to say that naval aviation in all countries (and the Soviet Union was no exception) is the elite of the Armed Forces. The reason is simple: "the sea

does not forgive." In the event of a loss of orientation or engine failure, neither the I-16 nor the DB-3 will be able to make an emergency landing on the water. And a parachute over the sea does not help much - a person does not live long in the icy waves of the winter Baltic or the Barents Sea. The very first mistake for the crew of naval aviation may be the last. That is why there are no weak pilots in the aviation of the Navy. It is probably no coincidence that the first (and at the same time successful - in contrast to the shameful failure of Operation 81 DBAD) raid on Berlin was carried out by pilots of the 1st MTAP of the Baltic Fleet Air Force, and one of the best fighter regiments at the beginning of the war was the 13th IAP (future 4th Guards) from the Air Force of the Baltic Fleet. The only thing that is difficult to understand is why Soviet "historians" always forgot to even mention the aviation of the Navy when assessing the total number of Soviet aviation groups ...

The main tactical unit of the Luftwaffe was the aviation group. The Luftwaffe air group included only three squadrons (“staffels”) of 12 crews and a headquarters link, a total of 40 crews. Thus, in terms of the number of squadrons, three Soviet air regiments were equal to five Luftwaffe groups. The formation of the Luftwaffe, similar to the Soviet air division, was called a squadron. As a rule, each squadron consisted of three groups. In the military literature, the designations are accepted: squadron. JG (fighter), KG following (bomber), StG (assault) Units equipped with multirole twin-engine fighter-bombers

"Me-110", were designated as ZG ("destroyers") or SKG ("high-speed bombers"). If in Soviet aviation each regiment had its own "personal" number (for example, 123 IAP, 40 BAP), then in the Luftwaffe the air group was designated as an integral part of its squadron. For example, II / KG-53 is the second group of the 53rd bomber squadron. Within the same air group, staffels (squadrons) had continuous numbering, traditionally indicated by Arabic numerals. So, for example, 5. / JG-53 is the fifth staffel of the 53rd fighter squadron, which is part of the second group of this squadron, i.e., part of II / JG-53. Several squadrons of the Luftwaffe (from 4 to 6) were reduced

to an aviation corps (AK). The highest organizational structure of the Luftwaffe was the Air Fleet, which, as a rule, included two air corps. Before the start of the war in Soviet aviation, the corps link existed only in long-range bomber aviation (two bomber divisions in each of the five DBACs). Three days before the start of hostilities, on June 19, 1941, it was decided to deploy three air defense fighter corps (6th in Moscow, 7th in Leningrad and 8th in Baku), and there should not have been divisions in these corps be, and the 10-12 fighter regiments that were part of the corps were directly subordinate to the command of the corps and the air defense zone. It is also worth noting that the military aviation of Nazi Germany was a single centralized structure, and the Luftwaffe organizationally included not only all aviation units, but

also the ground air defense infrastructure (anti-aircraft artillery, searchlight units, etc.). On the contrary, in the Armed Forces of the USSR, there were, in fact, several different "aviations": - front-line aviation, units and formations of which were in

subordination of commanders of combined arms armies and fronts;

- long-range bomber aviation, which was directly subordinate to the High Command of the Red Army;

- independent aviation of the Navy. Air defense

aviation also began to form. In the future, the category of "combat aviation" will include fighter, bomber, assault air units.

(IAPs, BAPs, ShAPs in the Soviet Air Force, JG, KG, StG, ZG and SKG in the Luftwaffe). Accordingly, all reconnaissance, communications, transport, and air ambulances are excluded from accounting. Such a technique will lead to a decrease in the estimate of the number of enemy aircraft compared to that which was traditionally adopted in Soviet historiography, where party "historians" easily and naturally piled 12-ton "Junkers" and light-engine aircraft and auxiliary aircraft into one pile (to make that for some reason, they forgot the forgery in relation to the Soviet Air Force). And since there are always a lot of light-engine aircraft in quantity, then the numbers can be obtained to your heart's content (it's like writing: "There are two horses, one bull, two cows and 30 sheep on the farm of peasant Pupkin, and a total of 35 head of cattle "). Such a trick was especially "effective" for inflating the number of aviation allies of Germany (Slovakia, Croatia, Hungary, Romania).

The air forces of these backward agrarian countries, along with a few units of more or less modern combat aircraft, were in a considerable amount of hopelessly outdated trash, bought for a pittance from wealthy neighbors and suitable - at best - for initial pilot training. Another problem that arises in assessing the real strength of the

Soviet Air Force is the presence of a large number of new formations that are being formed. If the combat strength of the Luftwaffe for a number of years was approximately constant (for example, from July 1940 to January 1942, not a single new group of day fighters was formed), then the Soviet Air Force grew continuously and rapidly.

A year before the war, on June 1, 1940, there were 188 air regiments in the Armed Forces of the USSR. On October 23, 1940, People's Commissar of Defense Tymoshenko reported to Stalin, and already on November 5, the Politburo approved a program to further strengthen military aviation: by January 1, 1941, it was to be increased to 239 air regiments (of which 96 were fighter) with 14,108 combat aircraft. But on January 1, the year is just beginning, by the end of 1941, it was planned to bring the combat strength of aviation to a fantastic figure of 343 air regiments (including 149 fighter regiments, 22 regiments of long-ran

escort fighters, 144 bombers, including 36 long-range ones), which were supposed to be armed with 22171 aircraft (RGASPI, f.17, op.162, d.30, l.39).

The total aircraft fleet of the Soviet Air Force (including training, transport, sanitary, etc.) was planned to be increased to 32,432 units by the end of the

year. Poor Churchill! On September 1, 1941, he wrote to the Chief of Staff of the Royal Air Force: ***“I was delighted to learn from the latest report that the air forces of the metropolis have actually one hundred fighter squadrons ...”*** By the standards of Comrade Stalin, such a trifle was only enough to form 20 fighter regiments ... What stage did the implementation of such

grandiose plans reach by June 22, 1941? Apparently no one knows the exact answer. Signed by Vatutin (Chief of the Operations Directorate of the General Staff of the Red Army) on June 13, 1941, “A certificate on the deployment of the Armed Forces of the USSR in the event of a war in the West” reports the presence of “a ***total of 218 combat-ready air regiments, of which: IAP - 97, BAP - PO, ShAP - 11" .*** But already in the next paragraph, where the distribution of these forces to the fronts is indicated (it is this term - "front" - that is used in the text of June 13), the summation leads to the number of 225 air regiments. The well-known "Considerations on the Plan of Strategic Deployment" of May 1941 mention the same figure - 218 air regiments ***"available and combat-ready today .*** " The authors of the monograph "1941 - Lessons and Conclusions" argue that by June 1, 1941, there were already 266 air regiments in

service. In any case, there could not be any insoluble problems with the armament of the forming units, since with a full staff strength of the air regiment of 62–64 aircraft, “only” 21 thousand aircraft were required to equip 333 air regiments, but as of June 22, 1941, there were 20,000 combat aircraft (including 11,500 fighters) and factories continued to work hard in three shifts every day. It is worth noting that the last two figures are taken from the most conservative (in the good sense of the word) source - the statistical collection "Secret Classification Removed", released in 1993 by the scientific and historical service of the General Staff of the Russian Federation.

Let us now turn to the definition of the geographical boundaries of the theater of operations. In relation to the events of the first weeks of the Soviet-German war, the theater of operations should be understood as the territory of the five western military districts (Leningrad Military District, Baltic OBO, Western OVO, Kiev OVO and Odessa Military District), or, in more familiar and understandable terms, the territory of the Murmansk region and Karelia, Estonia, Latvia, Lithuania, Belarus, right-bank Ukraine, Moldova

and Crimea. In the sky above this theater in the first weeks of the war, in fact acted:

- from Germany: 1st, 2nd, 4th Luftwaffe Air Fleet and some parts of the 5th Air Fleet (in the Arctic); Romanian and Finnish aviation;

- from the side of Soviet aviation: Air Force of five military districts (fronts), aviation of the Northern, Baltic and Black Sea fleets, long-range aviation formations (1st DBAC in the Novgorod region, 3rd DBAC in the Smolensk region, 2nd DBAC in the Kursk region, 4th DBAK in the Zaporozhye region).

In order to make further comparison with the enemy aviation grouping more correct, the entire theater of operations will be divided into three lanes: "North" (Karelia and the Baltic States), "Center" (Belarus) and "South" (Ukraine, Moldova, Crimea) - in in accordance with the division of the invasion forces into army groups "North", "Center", "South".

The composition of the Soviet aviation grouping (units and formations, crews, aircraft) is presented in Appendixes 1 and 2. Based on the information presented there (not taking into account the attack air regiments armed with obsolete I-15 bis biplanes and TBAPs armed with obsolete slow-moving TB-3s), we will build the following table:

Table 17

	Истребители полки / эскадрильи	Бомбардировщики полки / эскадрильи
«Север»		
ВВС ЛенВО	13 / 65	9 /45
ВВС ПрибОВО	8 / 40	8 / 40
ВВС КБф и С.ф.	4 / 23	3 / 16
1-й ДБАК	- / -	4 / 20
Всего:	12 /60	16 / 80
«Юг»		
ВВС КОВО	20 / 100	13 / 65
ВВС ОдВО	7 / 35	5 / 25
4-й ДБАК	- / -	6 / 30
ВВС Ч.ф.	3 / 18	2 / 12
Всего:	30 / 153	26 / 132
ИТОГО:	67 / 341	67 / 338

So, the grouping of the Soviet Air Force consisted of 134 air regiments, 679 squadrons (excluding fleet aviation - 122 regiments and 610 squadrons). And this estimate is by no means overstated. Almost all, including quite “solid” studies, give large numbers. So, historians from the General Staff, the authors of the monograph "1941 - Lessons and Conclusions" report that ***"the grouping of the Soviet Air Force at the western border of the USSR included 130 air regiments" (and*** this is without taking into account the Navy Air Force!). A.G. Khorkov, the author of the monograph “The Tragedy and the Feat of the Border District Troops” published by Voenizdat back in Soviet 1991, counted 133 air regiments in the Air Force of five western districts on page 225. In the monograph by VS Shumikhin, published already in 1986, the number of air forces of the districts (excluding the regiments of the DBA and the

Air Force of the Navy) was determined at 119 air regiments. Be that as it may, 134 regiments accounted for slightly more than half (!) Of the total number of combat-ready air regiments. Such a situation, on the one hand, allowed the Germans to "hit the enemy in parts" (however, it must be borne in mind that any of these "units" was three times superior, as will be shown bel

On the other hand, with such a deployment, the notorious “destruction of Soviet aviation at border airfields” could not even be hypothetically possible - only units of the Air Force of four western districts (and this is about 90 air regiments) could become the object of the first “disarming” strike on the morning of June 22. Not to mention the fact that on June 22, 1941, many of these 90 regiments were based hundreds of kilometers from the border, and not a single bomb fell on their airfields ... Now

let's move on to accounting for the main component of combat aviation - determining the number of flight crews. And in this case, there is a scatter of data even within one statistical collection (see Appendix 2). The Soviet Air Force grew rapidly, re-equipped with new types of aircraft; accordingly, the process of relocation and retraining of flight crews was ongoing. The following table 18 is made up of rounded (so as not to create the illusion of non-existent accuracy) and arithmetically averaged numbers from Appendix 2. To maintain uniformity of accounting, the crews of 18 DBAD were taken into account in the strength of the Kiev OVO Air Force (in fact, it was so - the division was transferred in the very first days of the war under the operational subordination of the district / front air force command). The number of combat-ready crews of the Navy Air Force is not indicated in sources known to the author. Conditionally accepting the same ratio between the number of aircraft and pilots (1.25 to 1) as in front-line aviation, we arrive at the following estimate of the number of Soviet aviation crews in the Western theater:

Table 18

	Истребители	Бомбардировщики	Всего
«Север»			
ВВС ЛенВО	650	400	1 050
ВВС ПрибОВО	400	380	780
ВВС КБф и С.ф.	280	150	430
1-й ДБАК	- / -	150	150
Всего:	1 330	1 080	2 410
«Центр»			
ВВС ЗапОВО	610	490	1 100
3-й ДБАК	-	170	170
Всего:	610	660	1 270
«Юг»			
ВВС КОВО	900	650	1 550
ВВС ОдВО	390	180	570
4-й ДБАК	-	370	370
ВВС Ч.ф.	250	110	360
Всего:	1 540	1 310	2 850
ИТОГО:	3 480	3 050	6 530

So, let's sum up the first results. The grouping of Soviet aviation in the theater of war that began on the morning of June 22, 1941, the war consisted of 134 air regiments, 679 squadrons, which included about 6.5 thousand flight crews, including about 3.5 thousand fighter pilots. Is it a lot or a

little? Everything is

relative. The first in importance is, of course, a comparison with the number of enemy aircraft. Then we will evaluate the grouping of the Soviet Air Force and in comparison with the aviation of the Western Allies, which in May and August 1940 entered into fierce air battles with the Luftwaffe. The general composition of the

Luftwaffe grouping on the Eastern Front is presented in Appendix 3. The issue with the selection of "forming

regiments" in German aviation, we will decide extremely simply: we will consider all Luftwaffe air groups to be fully combat-ready. Even such as II / JG-77, III / JG-27, I / StG-2, II / KG-53, III / KG-3, II / KG-4, I / ZG 26 and many others who arrived to the Eastern Front, armed with less than half of the regular number of serviceable aircraft. Some difficulties arise with determining the number of combat-ready crews - in most sources known to the author, only information is given on the number of available and serviceable aircraft in each group, but without indicating the number of crews. Some information is available only for fighter squadrons. So, in the JG-54 squadron (1st Air Force) on the morning of June 22, 1941, there were 129 aircraft (including faulty ones) and 112 pilots (the number of pilots is 85% of the total number of aircraft). Data are also known for all formations of single-engine Luftwaffe fighters, but for other calendar dates of the 40th and 41st years (respectively, the number of pilots was 75.6%, 81.8%, 87.4%, 89.8% of the total number of aircraft, including defective machines). With sufficient accuracy for a reliable assessment, we will accept (with some “margin” towards increasing the number of combat-ready crews of the Luftwaffe) that the number of crews is equal to 90% of the total number of aircraft (note that to estimate the number of crews of Soviet naval aviation, we took a smaller figure - 80%).

The results are presented in Table 19. For ease of comparison with the Soviet Air Force, only the number of squadrons (staffels) is indicated. The Ju-87 dive bombers and the corresponding groups and staffs are included in the total number of bombers. The SKG, a group of "high-speed bombers" armed with multi-purpose Me-110s, also belongs to the same category. Two other Me-110 groups are included in the fighter aviation. A unit of six Me-110s of the 5th Air Fleet is accounted for as one fighter squadron.

Table 19

	Истребители эскадрильи / экипажи	Бомбардировщики эскадрильи / экипажи
«Север» 1-й Возд. флот	13 / 165	31 / 290
«Центр» 2-й Возд. флот	36 / 430	50 / 580
«Юг» 4-й В. флот, 5-й АК	9 / 100	24 / 220
«Юг» 4-й В. флот, 4-й АК	12 / 150	12 / 100
Всего:	70 / 845	117 / 1 190

Thus, the entire Luftwaffe grouping on the Eastern Front consisted of 187 squadrons (staffels) and about 2.0 thousand combat-ready crews. In terms of the

number of squadrons - 3.6 times less than in the opposing grouping of the Soviet Air Force; in terms of the number of crews - 3.2 times less. In terms of the number of fighter pilots, Soviet aviation has a fourfold superiority (3480 versus 845).

All of these are average numbers. Like any "average temperature in the hospital", they mask many important aspects of the case. For reasons, the discussion of which is far beyond the scope of this book, the Soviet command concentrated the most powerful grouping of troops in Ukraine, in the zone of the future Southwestern Front, while the enemy struck the main blow in Belarus. As a result, in the offensive zone of the Wehrmacht Army Group Center, an exceptionally unfavorable balance of forces for the Soviet Air Force developed: the most powerful Luftwaffe grouping against the weakest Soviet aviation grouping. But even in this direction, the numerical superiority by the beginning of hostilities was on the side of Soviet aviation (for fighters 1.42 to 1, for bomber crews 1.14 to 1). On the northern and southern flanks of the war, Soviet aviation had,

without exaggeration, an overwhelming numerical superiority. In the offensive zone of the Wehrmacht Army Group "North", the ratio of the number of fighters is 8 to 1, the crews of bombers - 3.7 to 1. In the sky over Ukraine, a hundred fighters of a single JG-3 squadron were opposed by the KOVO Air Force, which included about 900 pilots - fighters; the Soviet Air Force outnumbered the enemy by 9 times in fighters, in

4.6 times for bomber crews. Let us recall once again that these figures were obtained on the basis of a clearly underestimated (the so-called “forming regiments” were not taken into account, all ground attack and heavy bomber regiments without exception were not taken into account) estimates of the number of Soviet aviation. Let us remind you once again that the calculation was made according to the number of crews (!), and not aircraft (there were

significantly more aircraft in the air forces of the districts than crews). Now let's look at the situation from the other side, the Anglo-French side. As noted above, French fighters in May 1940 and RAF fighters in August 1940 met with a much more powerful Luftwaffe grouping than the one that was created in June 1941 on the Eastern Front (see Table 20). At the same time, a comparison of the strength of the fighter aircraft of the Soviet Union with the fighter aircraft of the Western allies makes one recall Gulliver in the land of the Lilliputians (see Table 21).

Table 20

	10 мая 1940 г. самолеты / группы	13 августа 1940 г. самолеты / группы	22 июня 1941 г. самолеты / группы
Бомбардировщики	1736 / 40	1482 / 42	930 / 29
Пикировщики «Ju-87»	360 / 9	365 / 9	306 / 8
Истребители Bf-109	1226 / 27	976 / 26	923 / 22
Многоцелевые «Me-110»	319 / 9	244 / 9	185 / 4
ИТОГО:	3641 / 85	3067 / 86	2253 / 63

Table 21

	Эскадрильи	Летчики
Истребители Франции, Голландии, экспедиционные силы британских ВВС, май 1940 г.	50	700
Истребители Королевских ВВС Британии, август 1940 г.	52	650
Советские истребители западных округов и флотов, июнь 1941 г.	341	3 480

The above generally accepted methodology for assessing the balance of forces of the parties according to the “instant photograph” of June 22, 1941 significantly underestimates the real power of the “wall” against which

German aircraft were crashed. The fact is that on the Eastern Front the Luftwaffe fought all summer in an almost unchanged composition, and this is no coincidence. From May 1940 to June 1941, the general military-political situation changed radically. Now the Luftwaffe was fighting in the spaces from North Africa to the north of Norway, from Brest on the Bug to Brest on the Atlantic coast of France. By a strange coincidence, on June 21, 1941, the British carried out two massive raids according to the "Circus" scheme, when more than 300 fighters and bombers participated in one sortie. To counter the ever-increasing attacks of the Royal Air Force, the Germans concentrated 6 fighter air groups on the coast of Belgium and France. Another 10 air groups for various purposes fought in the Mediterranean theater of operations, 5 groups - in Norway, and the air defense system of Germany itself was already beginning to require the concentration of significant forces. As a result, by June 22, 1941, about 40% of the available aircraft and aviation groups of the Luftwaffe were not on the Eastern Front. At the same time, the grouping of the Soviet

Air Force was constantly growing - both due to the transfer of large aviation formations from the internal and Far Eastern districts to the west, and as a result of the German advance to the east. This question - for obvious reasons - is almost not developed in Russian historiography. Only occasionally there are brief references to the fact that ***“in June 1941, two mixed aviation divisions were relocated from the Air Force of the Moscow Military District to the Western and Southwestern Fronts, and one fighter and one mixed aviation divisions from Transbaikalia and the Far East” .*** (27) Four air divisions are at least 12 regiments and about 700 crews. By dwarf standards, the Luftwaffe is a whole “Air Fleet”, which arrived at the front in just one week after the outbreak of hostilities. The monograph by I.V. Timokhovich reports that in five weeks (until the end of July) 15 air divisions arrived at the western theater of operations from the internal and Far Eastern districts. (30) Exactly one month after the start of the war, an air battle began in the

sky over Moscow. As stated in the monograph dedicated to this battle, ***“The command of the Nazi air forces concentrated a specially created aviation group in***

consisting of the 3rd, 28th, 53rd, 54th and 55th bomber squadrons and the 100th bomber group ... In order to make the largest number of flights to Moscow, the fascist squadrons were relocated to the captured airfields of Minsk, Bobruisk, Orsha, Vitebsk, etc. The aviation group had more than 300 bombers." (41)

Of the five squadrons listed above, four were already on the Eastern Front from the very first days of the war. Their concentration in the central sector of the front meant the exposure of other sectors according to the “Trishka caftan” method. Really new, transferred to the Eastern Front from Western Europe, were the 28th squadron and the 100th group. But even taking into account the additional number of these units, “the aviation group had only 300 bombers,” that is, less than it was in the 3, 53, 54, 55 squadrons before the start of hostilities (354 aircraft). At the same time, the 6th Air Defense Air

Corps at that time had 11 new fighter regiments, not exhausted by previous battles, which were armed with 585 fighters, including 265 MiG-3 and Yak-1 aircraft. These figures are taken from the monograph by A.G. Fedorov, published for the first time in 1972. No “democrats” had time to put a hand to this ...

A few words should also be said about the aviation of Germany's allies. Of course, the Finnish, Hungarian and Romanian Air Forces could not have any significant effect on the balance of forces of the parties and the course of hostilities, especially since they had to operate in those sectors of the common front where the numerical superiority of Soviet aviation was enormous. However, they should not be completely discounted. The aviation of these countries (except for several hundred antediluvian training and reconnaissance vehicles, which Soviet "historians" always added with great pleasure to the strength of the Luftwaffe) also included quite combat-ready units. First of all, this applies to the Finnish Air Force, whose pilots have accumulated considerable combat experience during the three months of fierce air battles of the "winter war". Finnish fighters with a total number of about 150 aircraft took part in the fighting in the skies of Karelia. They were armed with Dutch Fokkers, French Morans, American Hawks and Brewsters,

Italian Fiats. In a word - quite worthy cars of the late 30s. The largest was the Romanian

Air Force. During the year, from the summer of 1940, Germany made significant efforts to rearm the aviation of its new ally and train Romanian pilots. As a result, by June 22, the Romanian Air Force had 8 fighter squadrons and 11 bomber squadrons. There are about 200 aircraft in total, including such quite modern (for the beginning of World War II) aircraft as the German He-111 bomber, the Italian three-engine SM-79, the German He-112 fighter (an unsuccessful competitor of the Messer in the 1936 competition years) and even a dozen English "Hurricanes" (which Romania managed to buy even before it went over to the side of Germany). In general, it can be assumed that Allied aviation increased the combat potential of the Luftwaffe by 10–15 percent.

The above figures provide a clear and convincing answer to the favorite question of Soviet historians: "Why didn't Stalin believe intelligence?" This amazing question is based on two, not explicitly formulated, theses: it is assumed that "intelligence" reported to Stalin something terribly terrible, but Stalin did not do something necessary "for the defense of the country." In fact, everything was much simpler. On Stalin's desk lay reports from which it followed that the Luftwaffe grouping near the western borders of the Soviet Union had not yet reached 2/3 of the one that was assembled on May 10, 1940 on the 300-km sector of the front for the invasion of Belgium and France. And what conclusions should be drawn from this information? Could the cautious and prudent Stalin believe that the Germans would risk advancing into the depths of an endless country without a firm air superiority? According to all the canons of military science, an offensive requires numerical superiority. Preferably two or three times. How can the Luftwaffe win air supremacy, yielding to Soviet aviation four times in the number of fighters?

However, unlike other contemporary authors, let's not pretend to be a "privy adviser to the leader." What Stalin thought is a mystery. But this is how the first hours of the German air force were perceived

offensive commanders of the Red Army, it is known for sure. ***“The enemy has not yet brought into action significant air force forces, limiting himself to the action of individual groups and single aircraft ...” (61)*** These are the lines from the report of the headquarters of the North-Western Front No. 3, signed at 12 noon on June 22, 1941. The assessment is quite understandable, given that the actual number of serviceable combat vehicles (341 aircraft) in the 1st Air Force of the Luftwaffe turned out to be almost ten times less than what the top leadership of the Red Army expected to see in this direction. At least at the entrance of the famous operational-strategic "game" conducted by the General Staff of the Red Army in January 1941, 3,000 aircraft supported the "western" ones from the air in the

Baltic direction. (121) What Stalin himself planned, having for some reason gathered a huge aviation group near the western borders of his empire, we do not know for sure. Documents that can finally confirm or refute the existing hypotheses are still classified. Unless they were destroyed, at the latest - in October 1941, on the eve of the flight from Moscow ... Only a small and, strictly speaking, insignificant fragment of the Big Plan is known in detail - a plan to cover the mobilization, concentration and operational deployment of troops of the western military districts. Once again, let's clarify and emphasize with a thick red line: the cover plan is just part of the operational plan. This is a plan of action - defensive in its essence - for those few days that the troops of the District needed in order to turn into full-fledged, equipped "for the campaign and battle" troops of the front. But even at this preparatory stage of action, an extremely "active defense" was planned. In particular, according to the plan to cover the Western OBO (the future Western Front in Belarus), the Front Air Force had to solve

the following tasks:

a) by successive strikes by combat aviation on the established bases and airfields of the enemy, as well as by combat operations in the air, to destroy enemy aircraft and from the very first days of the war to gain air supremacy b) by close fighter aircraft

in cooperation with the entire air defense system of the district, firmly cover the mobilization and concentration of troops ... and prevent enemy aircraft from flying through the territory of the

district ... d) powerful, systematic strikes on large railway bridges and junctions: Königsberg, Marienburg (Malbork), Allenstein (Olshtyn) , ***Thorn ,*** Lodz, Warsaw, as well as groupings of troops to disrupt and delay the concentration of enemy troops ... Based on the

assigned tasks and the availability of bomber aircraft, the district Air Force units can solve the following tasks: a) deliver a simultaneous

attack on established enemy airfields and bases located in the first zone, to the line of Insterburg ***(Chernyakhovsk),*** Allenstein, Mlava, covering the actions of bomber aircraft with fighter aircraft Warsaw, Deblin,

To accomplish this task, 138 links will be required, we have 142 links, i.e., using all available bomber aircraft, we can solve this problem at the same time;

b) with the second sortie of bomber aircraft, strike at enemy airfields and bases located in the second zone up to the Königsberg, Marienburg, Torun, Lodz line ***(200-250 km from the border.*** - M.S.). For this purpose, aircraft such as "SB", "Pe", AR-2, of which we have 122 links, can be used, 132 links are required to solve this problem, 10 links are missing .... c) ... only Pe-2 and AR-2 aircraft

can be used to strike railway / road bridges, which can carry out dive bombing ... Due to the fact that we have few dive bombers, it is necessary to take only the main bridges for destruction ***(through the Vistula.*** - M.S.), such as: in Torun, Warsaw and Demblin ...

The most remarkable thing in this text is not even that it was planned to start hostilities before the enemy fires the first shot, moreover, before the enemy finishes concentrating his forces (how else can one “disrupt and delay the concentration of enemy troops”?) , But twice repeated phrase about "established airfields and bases of the enemy." Yes, and with a specific calculation of the order of forces necessary for their destruction. Against this background, the stories about the fact that our aviation, obeying the mythical "Stalin's ban", only timidly and timidly looked at the reconnaissance flights of German aircraft, look somehow strange, and at the same time on the adjacent territory - not with a foot (or better, not with a wing).). The self-critical assessment of the small number of dive-bombers, forcing us to confine ourselves to “destroying only the main bridges,” is quite understandable today - the main attack was planned not from Belarus, but from the territory of the Lvov ledge in Ukraine in the direction of Krakow - Katowice; the main forces of the Soviet bomber aviation were concentrated there. Could the commander of the troops of the Western OBO, General of the Army Pavlov, imagine in his worst

nightmare that just a week after the start of the war, the remnants of the aviation of the Western Front would unsuccessfully try to destroy bridges and crossings - but not on the Vistula near Warsaw, but near Rogachev on the Dnieper ...

Chapter 21 Airplanes and People

Let us now turn to a brief review of the aircraft fleet of the opposing sides. By the time the hostilities began,

the 1st, 2nd, 4th Air Forces of the Luftwaffe were armed with about 2250 combat aircraft. In principle, it is impossible to give an exact figure - aircraft in the Air Force are expendable material that arrives, departs, deteriorates, is repaired, transferred from the balance of one structure to the balance of another ... And all this happens during a war, the very nature of which does not imply the possibility of keeping records like accepted in a modern computerized warehouse. Available sources allow us to estimate the number of serviceable - by the morning of June 22, 1941 - Luftwaffe combat aircraft at 1760 units (78% of their total number). If we compare the number of combat-ready aircraft with a staffing strength of 187 squadrons (staffels) and 63 headquarters units (a total of 2496 aircraft), then the percentage of serviceable combat vehicles available will drop to 7%. And this is not surprising - many air groups, especially fighter and dive groups, arrived on the Eastern Front straight from the heat of air battles in the Mediterranean theater (the Balkans, Crete).

Unlike many other "consumables of war," aircraft are capable of moving on their own. Fast and long distances. From the northern flank of the Eastern Front (Riga) to the southern flank (Odessa), a bomber plane could fly without intermediate landings (only 1,400 km in a straight line) in 4 hours. Yes, a fighter jet would need to make one or two stops when flying over such a distance, but the light day in June lasts about 18 hours, so that the plane could arrive at its destination by evening. The carrying capacity of the sky, unlike bridges and railways, is close to infinity. The huge strip of Pripyat swamps stretching 300–350 km inland, which divided the theater of operations into two almost isolated regions in the first weeks of the war, practically did not interfere with the relocation of aircraft. That is why, pointing out in the previous chapter

distribution of aviation units and formations in separate sections of the theater of operations, we will not do the same with regard to "consumables", and the number of aircraft of different types will be given only in summary form.

The grouping of Soviet aviation, the composition of which was described in detail in the previous chapter, was armed with about 8250 combat aircraft (fighters and bombers). In comparison with the enemy's aircraft fleet - almost fourfold superiority (3.7 to 1). About 84-87% of them were (as of June 1, 1941) in good, combat-ready condition. 85% of combat-ready aircraft is an excellent indicator; there was nothing like this in the Luftwaffe and will not be until the end of the war. We emphasize once again that behind this “first echelon” grouping there were approximately the same number of aircraft in the internal districts, in the Transcaucasus and the Far East (in total, the Soviet Air Force at the beginning of the war had 11.5 thousand fighter aircraft and 8 .4 thousand bombers). (35, p. 359)

Now consider the composition of the aircraft fleet by types and models. At the same time, we recall once again that we are talking about an “instant photograph”, moreover, taken on different days (June 1 and 21), moreover, inconsistent in different sources of information with an error of 5-15%.

Accordingly, the figures are rounded to tens; all, including temporarily out of order, aircraft are taken into account.

Bombers

The Luftwaffe group on the Eastern Front was armed with 530 Ju-88s, 280 He-111s and 100 Do-17s.

As part of the Soviet aviation grouping (including DBA and naval aviation): 1250 DB-3f, 1750 SB, 195 Su-2 and 50 Yak-2/4

The total "bomb salvo" (considering the maximum bomb load) is 2150 and 6150 tons of bombs, respectively. But these figures do not take into account two important facts. On the one hand, a significantly larger number of carrier aircraft made the Soviet grouping less vulnerable to enemy air defense and, accordingly,

provided a greater likelihood of regular "delivery" of these 6 kilotons to enemy targets. On the other hand, each of the 530 “semi-dive” Ju-88s could drop 1 ton of external bombs in a dive, which undoubtedly increased the effectiveness of hitting point targets. The extremely difficult question of how to quantify these circumstances will have to be left open, as it is far beyond the scope of this book. The strike aviation of the battlefield was very small on both sides of the

front. In the air groups of the Luftwaffe there were 310 dive "Ju-87". 100 Me-110 bomber fighters (two SKG groups) can be attributed to the same category. There were practically no Il-2 attack aircraft in the Soviet aviation in the first days of the war. Aircraft

similar to the Ju-87 and Me-110 include Ar-2 and Pe-2 high-speed dive bombers. In June 1941, the Air Forces of the five western districts included 205 Pe-2s and 140 Ar-2s.

The total bomb salvo is 400 and 330 tons, respectively. In this category of bomber aircraft, the undoubted quantitative and qualitative superiority was on the side of the Luftwaffe.

Fighters

The only type of single-engine Luftwaffe fighter on the Eastern Front was the Messerschmitt-109. The German command tried to re-equip the groups participating in Operation Barbarossa as quickly as possible with the latest modification of this aircraft: by June 22, 1941, there were already about 600 new Messers of the F series and about 250 of the previous E series in units. condition was nearly 700 units. The 90 twin-engine multipurpose "Me 110" (two ZG groups) can also be attributed to the number of fighters. Thus, on the Eastern Front, the Luftwaffe had about 950 fighter aircraft.

For reasons detailed in Part 2 of our book, the re-equipment of Soviet fighter aircraft was delayed, and was not carried out in the most optimal way.

Nevertheless, by the beginning of the war, the Air Forces of the five western districts and the Air Forces of three fleets (but excluding fighters from the 6th Air Defense Corps of Moscow) already had about 950 MiG-3s and 110 Yak-1s. As you can see, the number of Soviet aircraft -fighters of "new types" somewhat exceeded the total number of German fighters of all types on the Eastern Front. On the other hand, the aircraft launched into serial production in extreme haste had a whole “bouquet” of design flaws, while for the Bf-109 the period of “childhood illnesses” was already in the past.

The veteran I-16 remained the main fighter aircraft of the Soviet Air Force and Navy. By the beginning of the war, there were (including naval aviation) about 2000 I-16s in the theater. "Donkeys" are different, from type 10 to type 29. Taking into account the fact that in 1939-1941. 2427 I-16s were produced with powerful M-62 / M-63 engines (type 17, 27, 28 with cannon armament and type 18, 24, 29 with machine gun armament), it can be assumed that these models of "donkeys" (The performance characteristics of which are discussed in detail in Part 1) were the majority. So, for example, in the Air Force of the Baltic Fleet, out of 137 serviceable I-16 fighters (they were the only ones taken into account in the total number indicated above), 132 aircraft belonged to the indicated modifications.

In addition, three dozen fighter aviation regiments were armed with the "latest" (judging by the release date), but certainly outdated technically "seagulls" (I-153). There were at least 1,700 I-153 aircraft in the fighter units. Let's not rush to assess the combat capability of the fighter regiments armed with "seagulls". Reality - as will be shown in the following chapters - turned out to be much more complicated than the "tablet" with performance characteristics.

By the way, the low-speed giants TB-3 (which we did not even include in the total number of Soviet bombers) with tactically correct (i.e. night) use turned out to be both effective and very tenacious: the TB-3 crews performed on them in an average of 100 sorties per combat loss! (122) For 1941, these are record figures. The tragic episode described in the novel by K. Simonov really happened in reality, and it was in the Bobruisk area (on June 29, a group of bombers from the 3rd TBAP received an order to bomb during the day

crossings on the Berezina and on the way back was completely destroyed by the Messerschmitts). Thanks to the outstanding talent of the writer (as well as the gigantic circulation of Soviet publishing houses), it was this episode, and not the dry statistics of the results of the combat use of the TB-3, that became for millions of people almost a "standard" of the actions and capabilities of the Soviet Air Force in the summer of 1941 ...

Concluding the conversation about aircraft and continuing the parallel comparison of June 1941 with May 1940, it should be recalled once again that the French pilots inflicted enormous damage on the Germans on Morans and Hawks, which, in the totality of parameters, were no better than our well-deserved "donkey" and at the same time, just like the I-16, they were inferior to the Messerschmitt in speed. As for the newest MiG-3 and Yak-1, they were at least as good as the British Spitfires of the first Mk-1 series (with machine guns and a 1000-horsepower engine) in terms of performance characteristics and, without a doubt, surpassed the best French "Devoitins" D-520. We repeat that by May 10 there were only 36 (thirty-six) of these "best" in the fighter units of the French Air Force. Soviet historians about the aircraft present in the Soviet Air Force in such quantities

didn't even remember...

The main component of military aviation is not airplanes, not airfields, not aircraft factories, but pilots. Having finished with the recalculation of inanimate objects, we will try to outline some points related to the level of flight and tactical training of the crews of the Soviet Air Force. This topic is extremely complex. First of all, because the desired "level of training" is very difficult to adequately describe some quantitative parameters that allow you to make rational, rather than speculative assessments and comparisons. Perhaps it is precisely because of this complexity that Russian historiography for many decades continued to stagnate at the level of pointless declarations about "Luftwaffe aces who have accumulated two years of war experience" and without exception "young" Soviet pilots with a training raid of "three hours in a" box "".

On November 5, 1940, Decree of the Council of People's Commissars No. 2265-977s / s “On the Red Army Air Forces” was approved, according to which, by the end of 1941, the strength of the Soviet Union Air Force was to be increased to 32,432 aircraft and 60 thousand people.

flight crews. (1, p. 354) The last number looks completely irrational. All military aviation in the world always plans to have more aircraft than pilots. And it's clear why. Firstly, the resource of an aircraft (especially an aircraft engine) is very small, and its “peaceful life” is much shorter than that of a pilot. Secondly, in combat conditions, the loss of an aircraft is by no means always accompanied by the loss of a pilot. There is a parachute, there is the possibility of a safe landing of a damaged aircraft (for example, the German fighter squadron JG54 "used up" 2135 aircraft on the Eastern Front during the four years of the war, while 416 pilots died). What did Comrade Stalin have in mind

when he planned to produce two crews for one aircraft? The unthinkable situation in any army in the world in the summer of 1942, when cadets of flight schools were sent to the infantry? It is also worth noting that the appearance of the Decree of the Council of People's Commissars of November 5, 1940 cannot be explained by a "situation of extreme necessity" - by that time there were already 37,558 pilots in the Red Army Air Force. (1, p. 352) These figures should be compared with the fact that the Royal Air Force on the eve of the "Battle of Britain" had at its disposal only 1434 fighter pilots.

Plans for the training of tens of thousands of pilots came into conflict not only with common sense, but also - and much more seriously - with the actual volume of production of aviation gasoline in the USSR. It is sad and strange, but the country, which ranks first in Europe in terms of oil production, experienced an acute shortage of aviation gasoline. The situation escalated significantly precisely at the turn of 1930-1940, when mass production of aircraft equipped with uprated engines M-62 / M-63 (“donkeys” of the latest modifications and “seagulls”), M-105 (“Ar-2”, “ Pe-2", "Yak-1", "LaGG-3"), AM-35/AM-38 (MiG-3 and Il-2). All these engines were forced versions of their predecessors, with the main method of increasing power being to increase the compression ratio and/or boost pressure. Both required gasoline with higher anti-knock properties (with an "octane number" of 92–96 units). The production of high-octane gasoline B-78 in 1939 amounted to only 40.6 thousand

tons (this amount could be enough for about 100 thousand gas stations of a light fighter). Planned

the task for 1941, established by the Decree of the Security Council of the Central Committee of the All-Union Communist Party of Bolsheviks of February 8, 1941, assumed the production of 200 thousand tons of B-78, while the estimated need for the Air Force (taking into account new formations) for the year of the war was 1030 thousand tons - and this is without taking into account the needs of the Navy Air Force and industry (several tons of gasoline were spent on bench testing of the aircraft engine). The acute shortage of high-octane gasoline immediately affected the level of flight training. So, in May 1941, in the decision of the Main Military Council and in the order of the People's Commissar of Defense, following the results of the combat training of the Red Army Air Force for the winter period of 1941, it was stated that in the LenVO and ZapOVO flight training was limited by

the fuel limit, which was only enough for 30% of the program . (141) It must be admitted that in the matter of flight crew training, the pursuit of incredible “quantity” has clearly prevailed over the requirements of “quality”. And although the aircraft fleet of educational institutions of the Soviet Air Force theoretically made it possible to train up to 50 thousand (!) cadets at the same time, the training of highly qualified specialists in such volumes is impossible. Nowhere and never. The Decree of the Council of People's Commissars of November 5, 1940, mentioned above, expressed in a concentrated form the idea of creating a mass, poorly trained "air infantry" that would "eclipse the sky" over the enemy's head not in a figurative, but in the very liter

One Decree inevitably required the adoption of the next one (Resolution of the Council of People's Commissars No. 368-167s / s of February 22, 1941), which introduced a "rapid-fire" system for training military pilots. However, even this extremely adventurous document did not provide for the notorious “3 hours in a box”, but 13 months of training (9 months in wartime conditions) and 50-54 hours of training flight before sending the pilot to the combat unit. The training of the pilot did not end there: the annual training raid in combat units was set at 160 hours, of which 20 were for exercises jointly with ground forces. (1, p. 355). For our investigation, the most important thing in Decree No. 368 is the date of its adoption - February 1941. The simplest calculation of time by months shows that such "fast food pilots" in June 1941 in the combat units of the Soviet Air Force

it just couldn't be, and countless lamentations on this subject are either a manifestation of deep ignorance, or deliberate misinformation of readers. Despite serious problems

with fuel, flight and combat training in parts of the Soviet Air Force was in full swing. At least in the western districts and where there was a conscientious, responsible commander. Of the many examples, we will select only those that are related to the formations of the Western OVO Air Force, which suffered the heaviest losses in the first days of the war:

> The sky above the airfield trembled with the roar of engines. It seemed that this rumble did not have time to subside in the evening. In addition to the three regiments "I-16" and the regiment "Seagulls" in the division, which I was entrusted with command, there were many training aircraft, communications aircraft - more than three hundred aircraft in total. And **all this buzzed, took off, fired, landed from morning to evening every day *(hereinafter it is emphasized by me.*** - M.S.). It seemed to me that the mode of our work was not tight enough, and I hurried the staff officers and regimental commanders. We were told: “You have good equipment, a well-equipped airfield hub, you have been given the right to select the best graduates of flight schools, they **don’t save fuel on you ...”**
>
> ***(55)***

This is a fragment from the memoirs of General G. Zakharov, commander of the 43rd IAD of the Western OVO. A similar picture is found in the memoirs of General F. Polynin, commander of the 13th BAD of the Western OVO: ***“Most of the crews have successfully mastered such a complex type of combat training as flying and bombing at night. Flights at night were often made at full radius. The crews learned to bomb targets not only on their own, but also on unfamiliar training grounds ... The minimum time was allotted for landing. Immediately after landing, the aircraft dispersed and camouflaged. Crews were taught to act as needed in a war ... Much attention was paid to practicing takeoff***

and landings from unfamiliar unpaved airfields. Here again, the experience gained in China came in handy. This was done most often suddenly: rising into the air, we did not know what the airfield was like on which we would have to land. On the other hand, the crews acquired the richest practice of redeployment on alarm ... The alarm was announced quite often in the regiments, usually in the middle of the

night ... " (49) Lieutenant Colonel P. Tsupko, at that time - crew commander at 13 BAP (9 SAD) recalls:

> From dawn to dusk, squadrons of **camouflaged aircraft** with suspended bombs and weapons, with crews stood ready. It was very tiring, but there was no other way out. The regiment had five squadrons of twelve crews each. Usually three of them were on duty, the rest studied, flew. A day later, the squadron
>
> changed...

(64)

Air Marshal N. Skripko, on the eve of the war, commanded the 3rd DBAK, deployed in the deep rear of the Western OVO:

> The combat training of the crews progressed successfully. Squadrons **flew almost daily...** Along with intense flight work, **combat alert actions were persistently practiced.** Shelters of the simplest type for personnel were equipped at each airfield, aircraft parking areas were prepared in the zone of dispersal of aviation equipment .... People fought for speed, clarity, organization of actions on alarm. The study approached the real requirements of the war ...

(50)

The phrase about the "real demands of war" is not accidental. Let's not forget that in addition to tens (or hundreds) of hours of flight training, many pilots of the Soviet Air Force also had experience

hundreds of sorties. The pilots who met the beginning of the Soviet-German war in the Air Force units of the western districts were by no means “yellow-mouthed chicks”.

> Among the leadership of the regiment's administration, squadron commanders, flight commanders were officers from the aviation units of the Leningrad District. All of them had significant service and combat experience gained in the skies of Spain, in battles on Lake Khasan, the Khalkhin-Gol River, in the war with the White Finns ... Almost all of them had government awards. So, for example, the regiment commander Colonel N.F. Efimov was awarded the Order of Lenin and the Order of the Red Banner, the navigator of the regiment, Major G.I. Gabunia was awarded two Orders of the Red Banner. Squadron commanders, their deputies and navigators also received government awards.
>
> ***(85)***

What kind of regiment is this? Special, rare, elite? No, we are talking about the so-called "forming" 202 BAP (41st BAD, Leningrad Military District). Almost all the memoirs of the participants in the first air battles in the summer of 1941 contain a mention that on the chest of the commander of the regiment (squadron) sparkled the Order of the Red Banner (Red Star, Order of Lenin), received for battles in Spain, in China, against the "White Finns" ... All known by comparison.

One can argue for a long time about whether the combat experience acquired by Soviet aviators during four years of fighting in the skies of Spain, China, Khalkhin Gol and Finland was sufficiently large and significant. But there is no doubt that by May 10, 1940, French and British pilots and their commanders did not have such a modest experience in combat operations: in the eight months of the "strange war" in rare air skirmishes with the enemy, the French shot down 88 German aircraft at the cost of losing 63 of their own. (21) These "battles" cannot even be compared with Khalkhin Gol, in the battles over which Soviet fighters shot down at least twice as many enemy vehicles. As for the Finnish war, then

the intensity of the actions of Soviet aviation (more than 100,000 sorties, three-quarters of which took place in February 1940) is comparable only to the events of the grand Battle of Kursk (89,300 sorties from July 12 to August 23, 1943). One of the

active participants in the "winter war" was the 1st MTAP of the Baltic Fleet Air Force (it was this regiment that bombed Helsinki on the first day of the war). Regiment navigator (later Lieutenant General of Aviation) P.I. Khokhlov writes in his memoirs:

> ...Previous studies and military operations have yielded results...Sniper crews for bombing and minelaying appeared in the regiment. Many flights were carried out using radio navigation aids. DB-3 aircraft were already equipped with RPK-2, radio semi-compasses that were competently used in flights. The trained crews mastered flights in the clouds. On average, each crew flew more than 200 hours **in 1940** ***(emphasis mine.*** - M.S.). (

143)

It is not surprising that by the beginning of the war with Germany, more than three thousand Soviet pilots had experience of personal participation in hostilities. combat experience, they were exactly on the western border - there was also the Far Eastern Front, there was a large Air Force grouping in the Transcaucasus, there was the 6th Air Defense Corps in Moscow ...).

Much more significant is the comparison of the combat experience of Soviet pilots not with their future (and extremely unexpected for Stalin allies), but with a long-awaited enemy - Luftwaffe pilots. Of course, during the two years of the war, German aviation, and in all its units - pilots, commanders, technical personnel - accumulated vast practical experience. Without a doubt, it was this experience of modern air warfare, the experience of successes and failures, that represented the most valuable component of combat

potential of the Luftwaffe. Without a doubt, in three months of fighting against the extremely small and technically backward "White Finn" aviation, Soviet pilots did not go through such a "school". These are indisputable facts, and the author is not going to question them.

The "reverse side of the coin" turned out to be unjustifiably forgotten. In war there is no correspondence and free "education". For the vast combat experience gained in air battles over France and England, Libya and Crete, the Germans paid with the loss of pilots - living carriers of this experience.

The figures characterizing the loss of Luftwaffe flight personnel are impressive. Only in the course of what Soviet historians called the "triumphant march of the Wehrmacht" (the defeat of France and its allies in May-June 1940), the Germans irrevocably lost 3022 people from the flight crews. (165) It was the aircrews, and not the personnel of the Luftwaffe as a whole. Further more. By October 1940 (by the time the most active phase of the “Battle of Britain” ended), only 4 pilots from its original composition remained in the ranks of the III / JG-52 fighter group (that is, one out of every ten!). (43) In the JG-51 fighter squadron, the loss of pilots by the beginning of Operation Barbarossa amounted to 116 people, i.e., almost equaled the squadron's regular strength. (63) In general, for less than two years of the war, from September 1, 1939 to June 22, 1941, the total losses of the Luftwaffe flight personnel amounted to 18,533 people, including 13,535 people killed, killed in accidents and missing (irretrievable losses) . (166, p. 531)

If, with such monstrous losses, the aviation of Nazi Germany did not disappear, but even grew in numbers, then there is only one rational explanation for this - on June 22, 1941, places in the cockpits of combat aircraft, “vacated” after the loss of experienced, well-trained crews back in the pre-war years , were filled with thousands of hastily trained pupils of the Hitler Youth. During the first two years of World War II, 1,951 cadets were killed in the Luftwaffe flying schools and another 1,439 were wounded. (166) Some idea of the pace and methods of training these pilots can be gained from the fact that on June 22, 1941, six "Messers" from the II (Sch) / LG-2 fighter group could not cross the Soviet border, because they crashed during takeoff on

airport in Suwalki. “Schülengruppa” is, in Russian, something like a “combat training group”. Yes, the 109th "Messer" had a well-known habit of tipping over on takeoff, but smashing six out of 38 cars
available in just one day...

As an illustration of these dry figures, we can give the following example. By the time the main events of the “Battle of Britain” were over, the nine best Luftwaffe fighter pilots looked like this: Balthasar, Wieck, Galland, Joppien, Melders, Mayer, Müncheberg, Oezay (Oesau), Schöpfel. Only three of them: Melders, Oesau and Joppien took part in air battles on the Eastern Front from the beginning of Operation Barbarossa. Four - Galland, Balthazar, Müncheberg and Schöpfel - continued to fight on the Western Front against the British, and two - Wieck and Mayer - had already been killed by this time. (43) On June 22, 1941, the surviving German aces met with the Soviet - as it is

written in one modern book - "inadequate amateurs." The first day of the war was, to put it mildly, not the most successful for the Red Army in general and the Soviet Air Force in particular. Nevertheless, already on June 22, the biography of the commander of the fighter squadron JG-27 Schellmann, a veteran of the Spanish and all subsequent campaigns, ended forever. On the same day, another most experienced Luftwaffe ace was shot down - the commander of the fighter group II / JG-53 Bretnunz (Bretnunz) (he died from his wounds four days later). Colonel Reithl was seriously wounded in the headquarters "Ju-88" from the headquarters of the bomber squadron KG-77 shot down over the Baltic states. On the same first day of the war, the commander of the bomber group I / KG-3 Heinze (Heinze) was wounded, the next day the commander of the dive group I / StG-2 Hitchholm and the commander of the fighter group II / JG-51 Feso were shot down by Soviet fighters (the last two survived and were found by advancing German troops). Of course, on June 22, 1941, the process of "knocking out" experienced, well-trained Luftwaffe flight personnel did not stop, but only began. A year later, on June 2, 1942, the

commander of the Air Force of the Southwestern Front in his order states that ***“the enemy is throwing his poorly trained aircrew into battle. Of the downed and captured German pilots, there are dropouts,***

who made only 1-2 sorties after graduating from schools. From the testimonies of the prisoners, it was established that the layer of this undertrained part of the flight personnel in the units of the fascist Air Force operating against our front is very high (up to 50%). One can argue about the value of these "percentages", but the indisputable fact is that most of the problems with the training of flight personnel traditionally attributed to the Soviet Air Force were just as relevant for the aviation of our enemy, drawn into a protracted air war on many fronts.

Another persistent myth, without which not a single publication devoted to the events of June 22, 1941, is the "dogma of the undeveloped". Regular readers of historical literature have already understood what is at stake. For the rest, let us explain that the latest “truth about the war” looks like this: “old types” aircraft (I-16, “SB”, DB-3) should be discounted because they were “hopelessly outdated”; but the latest "MiG-3" and "Pe-2" also do not need to be taken into account - they "were not mastered by the flight crew." Zero plus zero equals zero, and thousands of Soviet aircraft quietly disappear. Like a dream, like a morning mist... The stability of this myth is not

accidental - it contains a considerable amount of truth. Compared to the familiar and thoroughly studied "donkeys" and "SB", the new aircraft were poorly mastered.

This is a fact. This fact should be assessed, in our opinion, guided by the same universal principle: “everything is known in comparison”. Three warm months (April, May, June), which were at the disposal of the command of the Soviet Air Force before the start of the war, is very little compared to previous years of conditionally “peaceful” life. Only 686 pilots trained to fly the MiG-3 and 156 pilots trained to fly the Yak-1, who were retrained before June 22, are, of course, very few in comparison with the huge flow of “new types” fighters ", gushing from the factories of the aviation industry (in 1941, 3100 MiG-3s, 2463 LaGG-3s and 1354 Yak-1s were produced). By the way, the numbers 686 and 156 are taken from the work of V.I. Alekseenko, a big hater of the "democrats" ...

Now let's look at these three warm months from the standpoint of pre-war orders, requirements, and standards. On February 19, 1941, Rychagov signed the "Plan for the retraining of the flight personnel of the Red Army Air Force units on the new materiel." (16, pp. 665–676) First of all, from this document it becomes obvious that the program for re-equipping the fighter units of the Air Forces of the western districts with MiG-3 aircraft was generally overfulfilled. 7 IAPs, 15 IAPs, 23 IAPs, 4 IAPs, 55 IAPs each received six dozen MiGs, the re-equipment of which was planned for the 3rd (or even 4th) quarter of 1941. Another thing is even more remarkable - comparing the planned time for the receipt of new equipment with the planned time for completing the retraining of the flight crew, we see that two to three months were allotted for the development of a new fighter. No more. And this, mind you, is peacetime plans.

And in what terms did the rearmament of air units and the retraining of pilots in the war actually take place? Was the transition of the I-16 to the MiG-3 the only such event in the history of military aviation? Some fighter regiments of the Air Force of the Northern Fleet (in the Arctic, due to the flow of "Lend-Lease" aircraft, the renewal of the fleet took place very quickly) during the war they rearmed five or six times: from "donkeys" to "Hurricanes", then to "Yak-1", from "yaks" to "Kittyhawks", then to "cobras", at the end of the war - to "La-7". And how long did it take to retrain the pilots? Is it really six months for each new aircraft? Let's see how things were with our allies. In May 1940, the re-equipment of the

French Air Force fighter groups was carried out literally "on the go", in the midst of intense air battles. So, in just three weeks, from May 10 to June 5, the following were re-equipped: (21) on the Devuatin D-520 - three groups (GCII / 3, GCII / 7, GC III / 3); on "Bloch-152" - two groups (GC II / 6 and GC II / 9); on the Hawk-75 - one group (GC III / 2). It is worth paying special attention to the pace of development of the Devuatin-520 fighter. The very first machines were commissioned in April 1940. By May 10, there were only 36 of them. Before the ceasefire, the French Air Force delivered three hundred more Devuatins, which were successfully mastered by the flight crew in

a matter of days. Fighting on these fighters, the French pilots shot down 108 German aircraft at the cost of losing 54 of their own (another 31 Devuatins were destroyed in accidents). The best at that time German ace Werner Melders was shot down on June 6, 1940 by So-Lieutenant Pomier Lerag from the GCII / 7 (at that time the parachute saved the life of the Luftwaffe pilot). Then the French pilot shot down another Messer, after which he ran out of ammunition, and seven German fighters shot down the helpless plane. The courageous pilot died in the Devuatin, in the cockpit of which he sat down for the first time

just a few weeks ago.

The fighter aircraft, aviation Finland (V in general which demonstrated exceptionally high combat effectiveness in 1939-1944) twice - in the winter of 1940 and in the summer of 1944 - was re-equipped with new types of aircraft directly in the course of hostilities. After two or three familiarization sorties, the pilot immediately went into battle. Result? The ratio of losses of Soviet and Finnish fighters in the summer campaign of 1944 is expressed as 8 to 1. Of course, in favor of the Finnish Air Force. (142, p. 600)

With these facts in mind, let's take a look at the situation in the Soviet fighter regiments. According to the reports of the military representatives of plant No. 1, the mass dispatch of MiG-3 fighters to the air regiments of the western districts began in the second half of January 1941. What were the aviation commanders of all levels doing if the new aircraft turned out to be “completely undeveloped” by the second half of June? And when did this notorious “untappedness” come to light – the day before June 22 or half a century later, when it was necessary to find another “objective” reason for the defeat? The exact answer to these questions will consist of dozens of mutually exclusive

parts. The most surprising paradox of the totalitarian Stalinist system was the complete absence of a uniform, universal (total) order. Where there was an intelligent commander, in the unit entrusted to him, flight work was in full swing from morning to night. Here, for example, are the memoirs of the pilot of the 31st IAP (8th GARDEN, PribOVO) N.I. Petrova:

> ... We flew a lot. **In the autumn of 1940** (hereinafter it is highlighted by me. - M.S.) they began to study a new fighter

MIG-1 ... It differed in many ways from the I-16 aircraft, so it was necessary from morning to night, not considering the time, to study the engine and aircraft, operating instructions and piloting techniques. Test pilots arrived, the assembled aircraft flew around. The tester Stefanovsky was in charge, in the form of conversations he explained the features of the MIG-1 aircraft piloting technique, what to pay attention to, etc. ... I remember how they suffered, there were no flight accidents, but there were prerequisites for them ... Nothing, they mastered it before the Great Patriotic War already firmly mastered. **From April 1941 they were already on duty.** They were on combat duty on MIG-1 aircraft ... At the end of April, they began intensive training **as part of a flight, shooting at a cone, air battles ...** Often, **night flights were made for group flying** in

the composition of the link ...

P.I. Tsupko, the commander of the Ar-2 dive bomber, recalls:

... We received **the appropriate instructions and guidelines** for dive bombing. But it is one thing to read on paper and quite another to perform in the air .... Our training flights **were more like research flights.** After each flight, the commanders gathered us and, based on the reports of the observers and the reports of the crews, scrupulously, minute by minute, analyzed the actions of the pilots and shooters-scorers .... The landfill was located on a wasteland in Belovezhskaya Pushcha. There, the contours of tanks, vehicles, artillery batteries and just circles with crosses in the middle were drawn on the ground with lime. We bombed these ground targets with cement bombs. From flight to flight our skills grew, our skills were polished. **By the spring of 1941,** we were **quite confident in this method of bombing ...**

And at the same time, in another part, another sensible commander was denounced about espionage in favor of Zanzibar. In the third part, the commander fought "to reduce the accident rate", as a result of which the pilots, instead of flying, crammed the piston stroke and the diameter of the cylinder of the AM-38 engine (this is not a bad joke, this is the prose of the life of the 4th ShAP). There were also quite outlandish activities:

> ... At that time, we had to start with drill training for a single fighter, to show how we can command a squad ... Preparations began. For my department, I picked up eleven stately fellows - Red Army soldiers from 175 to 180 centimeters tall. And they set about... Drilling, political studies, cleaning weapons and walking in line along the surrounding roads, singing songs... And so every day, for a whole month... There was only one thing that was embarrassing: compared to others, I had a commanding voice that was not very good. It didn't work out: "Rrr-ya, rrr-ya, ryas, ah, three-and-and ..." Or "Pady-y mays! .." No, I didn't succeed. And then I decided to act according to Demosthenes: I regularly began to retire to the hills and scream there! It was to scream - with all my strength, loudly, stunned, then recite verses, shout out commands, separate words, sing ... ... After a brilliant victory in drill training, I had a new concern. Now the commander had to appear every time in full
>
> form. And "the whole form" means with a saber and with spurs. Another problem! Once I put on the saber and almost fell: it got entangled between my legs ... In order to keep the brand of the best combatant, I still had a lot of work to do myself, and every morning in my office I conscientiously trained ...

Dear reader, what do you think - what is THIS about? Who is this screaming running through the hills? This is twice Hero of the Soviet Union,

outstanding fighter pilot, Honored Air Marshal E.Ya. Savitsky enthusiastically tells in his memoirs about how in the spring of 1941 he spent a whole month mastering ***“rrr-ya, rrr ya, ryas, ah, three-and-and ...”.*** And what position did the 28-year-old captain Savitsky hold in the spring of 1941? The answer is that he commanded the 29th Fighter Air Division. And who is this idiot - I can't find another word - who in the spring of 1941 distracts the commander of an aviation division to a competition in order and song, and then also demands to walk around the airfield in spurs and with a saber? And this is the commander of the Far Eastern Front, a hero of the civil war, a comrade-in-arms of Budyonny and Timoshenko, army general Apanasenko. They say one of the best...

Chapter 22 IMPACT ON AIRPOINTS - THEORY AND PRACTICE

Our research has finally come to the central point - to an attempt to figure out what really happened to Soviet aviation in June 1941. The classic version is known. Hundreds of books and tens of thousands of newspaper articles, literally in the same words, tell the terrible story of the destruction of Soviet aviation (or, at least, the Air Force of the Western military districts) as a result of a sudden, crushing and inevitable strike by the Luftwaffe on "peacefully sleeping" airfields:

> ... On June 22, 1941, large groups of fascist bombers attacked 66 airfields, on which the main aviation forces of the western border districts were based. As a result of attacks on airfields and in fierce
>
> air battles, the enemy managed to destroy up to 1,200 aircraft, including 800 at airfields ... As a result of sudden massive attacks on airfields and the ensuing air battles, the losses of the air forces of the border districts by noon on June 22 amounted to 1,200 aircraft (including about 800 destroyed at airfields) ... Aviation of the Western and Kiev OBO suffered especially great damage, where fascist German aviation managed to destroy and damage 1015 aircraft on the first day of the war ... The greatest losses in the first hours of the war were suffered by the Air Force of the Western Front. By the end of the first day of the war, losses here reached 738 aircraft, and losses on the ground - 528 aircraft ...
>
> ***(31, 144, 27, 41)***

As befits a real myth, the myth of the “first annihilating strike on airfields” lives according to its own laws, not only not needing any documentary confirmation, but also not weakening in the least from the flow of new facts that have become available to everyone from the beginning 90s. The “Berlin Wall” collapsed, the Warsaw Pact disappeared into oblivion, the “unbreakable union” fell apart into 15 fragments, ideals, idols, flags, anthems changed with dizzying speed in the post-Soviet space - and once and for all the memorized mantra about “1200, of which 800 earth," everything sounds unceasingly. And now, in 2008, Moscow State University. Lomonosov publishes the textbook “History of Russia” (a group of authors under the guidance of A.S. Orlov, M., “Prospekt”, 2008), having learned which students must mint: “In the first days of the war ***(thank*** you for not at least in „ the first hours". ***- M.S.) a significant part of Soviet aviation was destroyed right on the airfields.*** The myth of the

destruction of Soviet aviation at "peacefully sleeping airfields" was carefully fashioned by communist propagandists not by chance. The story about a peacefully sleeping country that became the object of a vile treacherous attack was very useful - this legend removed many "unnecessary" questions about the real plans and real actions of Comrade Stalin. But even that was not the most important thing. First of all, it was necessary to drive into the minds of the contemporaries of the tragedy, their children and grandchildren, the idea of the objective inevitability, the inevitability of what happened in the summer of 1941. For which the thesis of some kind of “super extra-efficiency”, inherent in such a tactic as a strike on airfields, was the best fit. The perfidious enemy, taking advantage of the naive gullibility of Comrade Stalin, was able to use this miraculous trick - this is where all the troubles began ... In an effort to present a strike on airfields as a “magic wand” capable of turning the tide of

the war in the air in a matter of hours, Soviet historians contrived to surpass in the lies of even the most deceitful Dr. Goebbels. So, for the entire campaign of May - June 1940, French aviation irretrievably lost 234 aircraft from attacks on airfields (which amounted to 26% of its total losses - a very large figure, by the way). based in

In France, the fighter units of the British aviation in the first six days of the May battles lost only 4 (four) aircraft on the ground. Of course, such modest numbers did not suit Nazi propaganda, so the German news agencies announced that already on May 11 and 12, 1940, 436 enemy aircraft were destroyed on the ground. One well-known Soviet professor, academician of the Russian Academy of Sciences, doctor of military sciences and others claims that ***“on May 10, as a result of strikes on 72 French airfields, several hundred aircraft were destroyed, and on May 11 and 12 repeated massive strikes took place, which disabled another 700– 750 French aircraft ... "***

Strictly speaking, just a comparison of the sacramental number of "1200 aircraft" with the total number of Soviet aviation groups in the Western theater of operations shows that 85% (six out of seven) of the aircraft from the "first annihilating strike" did not suffer at all. And the next day after the notorious "1200, of which 800 are on the ground," the Soviet Air Force outnumbered its enemy many times over. The losses of the flight crew - and this is the basis of the foundations of the combat capability of military aviation - were (as will be shown below) completely insignificant. What then led to the catastrophic defeat? ***“No matter how dry these figures lined up in***

close columns in an officially printed document may look, they actually provide more valuable material for history than volumes full of rhetorical nonsense” (K. Marx, F. Engels. Soch., vol. 13, p. 513). We will start with dry numbers. True, they were “lined up in tight columns” not in an “officially printed document”, but in a rotaprint collection, decorated with the heading “Top Secret”. In 1962. The General Headquarters of the USSR Air Force prepared the statistical collection “Soviet Aviation in the Great Patriotic War 1941–1945. in numbers". (23) As compilers, 26 people are listed in ranks from lieutenant colonel to major general. The collection was declassified in

1992 and since then has become one of the main sources on the topic (in 2006 it was posted in full by Yu. Minkevich and P. Andriyanov at http://ilpilot.narod.ru/ws_tsifra/index.html).

Among many other important figures in the collection (hereinafter, it will be called "VVS in figures" for brevity), the losses of Soviet aviation are listed, broken down by years of war, types of aviation, types of aircraft, causes of losses. We will repeatedly return to these figures, but for now we note the main thing for this chapter - the number of Soviet Air Force aircraft lost from enemy attacks on home airfields:

Table 22

	Количество самолетов советских ВВС, потерянных от ударов противника по аэродромам базирования	%% к потерям	%% к поступлению
1942 год	204	2,47	0,92
1943 год	239	2,52	0,72
1944 год	210	2,68	0,59
1945 год	38	1,06	0,25
ВСЕГО:	691	2,37	0,65

Table 22 does not reflect the losses of the Navy Air Force, air defense fighter aircraft, and does not fully take into account the losses of the DBA. However, given that the losses at the airfields in these branches of aviation were negligible, and their aircraft fleet was no more than 10–15% of the total, Table 22 quite adequately reflects the overall picture. And the picture turns out to be absolutely enchanting: in three years and four months of the most difficult war, less combat aircraft were lost at airfields than in ONE DAY) on June 22, 1941. The dynamics of bomber losses is especially impressive. For three years and four months, 62 bombers were lost at the airfields. And in one day on June 22, 1941, 351 bombers were allegedly lost only in the air force zone of the Western Front (at least, this is the figure that M.N. Kozhevnikov cites in his fundamental monograph), and the German fighters of the 2nd Air Fleet themselves claim no more than than 100-150 downed Soviet bombers ...

Further, we see that the losses at the airfields were less than 3% of the total number of irretrievable losses. It was the smallest, rarest cause of combat losses. On a huge front, the Soviet military aviation, huge in number (at least 8-10 thousand combat aircraft), on average lost less than one aircraft per day from strikes on airfields. If we compare the number of aircraft lost from enemy strikes on airfields with the total number of combat aircraft that entered service with the Red Army Air Force in the corresponding year (35, pp. 359–360), then we get figures of less than one percent, i.e., in fact, a vanishingly small quantity. Less than the statistical error in the calculation of the values taken into account above. Tens of times less than the number of aircraft crashed at the same airfields due to equipment failures and piloting errors.

As the attentive reader has already noticed, we diligently passed over the year 1941 in silence. Maybe that year the stars became somehow special? Yes, nothing of the sort. The irretrievable losses of Luftwaffe aircraft from enemy attacks on airfields amounted to: 13 in June, 19 in July, 14 in August, 7 in September, 10 in October ... Total on the Eastern Front in 1941 at airfields from enemy attacks (i.e., Soviet aviation) 62 aircraft were irretrievably lost: 32 fighters, 19 bombers (including Ju-87 dive bombers), 7 multipurpose Me-110s and 4 transport Ju-52s. (145, 146, 147) On average, for a week at airfields (with the rarest exceptions, these were Soviet airfields on the territory occupied by the Germans), the Luftwaffe lost 2 aircraft each. Two a week, not 800 in one day. But, perhaps, the Soviet command simply did not know about such a miraculous tactic as a strike on enemy airfields? Nothing like this. Knew and most persistently tried to use this technique. From the very first hours of the war.

Directive No. 2, signed by People's Commissar of Defense Tymoshenko at 7 am on June 22, in particular, demanded: ***“... Destroy aircraft at enemy airfields and bomb the main groupings of his ground forces with powerful strikes by bomber and attack aircraft. Apply air strikes to the depth of German territory up to 100-150 km ... "***

This order was not only given, but carried out. More precisely, it was done. Moreover, some bomber regiments began raids on the airfields based on German aviation literally at dawn on June 22, even before the adoption of Directive No. 2 (more on this will be discussed in the following chapters). Alas, no panic reports, reports, memoirs of pilots and commanders of the Luftwaffe about these raids can be found. In war, as in war. We bomb - we are bombed ...

> Having received air reconnaissance data on the concentration of about fifty fascist fighters on one of the airfields ***(we are talking about the battles on the Berezina at the end of June 1941.*** - M.S.), the front air force commander decided to strike with the forces of the 43rd Fighter Aviation Division. Taking the Nazis by surprise, our pilots destroyed the German Me-109 aircraft standing on the ground with machine-gun fire and rockets. 79 sorties to the fascist airfield were then made by fighters and inflicted significant damage on the Nazis, without losing a single one of their cars ...

This is a fragment from the memoirs of Air Marshal Skripko, in those days - the commander of the 3rd air corps of the DBA. Fifty "Me-109" at the airfield near the Berezina - this is most likely one of the fighter groups of the Melders JG-51 squadron. 79 sorties on one airfield - this is a huge concentration of forces; practically not a single airfield based on the Soviet Air Force on the morning of June 22 received such a blow. What is the result? Of course, the JG-51 squadron did not disappear anywhere, the Melders pilots continued to fly and fight. The irretrievable losses of the JG-51 at the airfields taken into account in the German documents amounted to 1 (one) aircraft in June-July 1941. And in the

neighboring JG 53 - one plane. By the end of June 1941, almost all Luftwaffe fighter and attack air groups flew from airfields in Poland and East Prussia to airfields in the former Baltic and Western districts. A little later, in early July, units of the 4th Air Fleet were relocated to the airfields of Ukraine. Since

Soviet airfields, where allegedly "there was nothing" (gasoline storage facilities, telephone lines, caponiers for aircraft, shelters for personnel), German aviation recaptured the entire summer and autumn of 1941. It was on these airfields, the location of which was known to the Soviet command to the nearest meter, that Soviet aviation was now delivering massive strikes.

> ... On July 8, the Stavka organized an air strike by the forces and means of the Air Force of five fronts (Northern, North-Western, Western, South-Western, Southern), DBA formations on 42 enemy airfields on the front from the Baltic to the Black Sea ... At dawn on July 8, long-range bomber aviation formations struck strike on 14 airfields, and the air forces of the fronts - on 28 airfields. A total of 429 sorties were flown. Many aircraft were destroyed at enemy airfields, including the Air Force of the Western Front, which disabled 54 German
>
> airplane...

54 planes - that's just in one day. In total, in the period from 6 to 12 July, the Air Force of the Western Front alone allegedly destroyed 202 enemy aircraft on the ground. (23) Moreover, in the report, signed by the chief of staff of the Air Force of the Front, Colonel Khudyakov, it was also specifically noted that ***"enemy losses from the action of night bombers were not taken into account."*** It is a pity, but the enemy did not know anything about it. As noted above, on the entire Soviet-German front (and not just on the Western Front) the Luftwaffe lost 19 combat aircraft on the ground in July. Active actions to destroy enemy aircraft at airfields were

carried out in July by the 41st Air Force of the Southwestern Front. So, in the report of the commander of the Air Force, General Astakhov, we read:

> - ... for the period from July 1 to August 10, 1941, units of the Air Force of the Southwestern Front destroyed 172 enemy aircraft at airfields. This information is not complete enough, since the losses caused by

The enemy Air Force during night raids are not fully taken into account ...

(148)

A major operation on the scale of the entire Soviet-German front was carried out in October. ***“In the period from October 11 to October 18, 1941, the Red Army Air Force carried out a number of bombing strikes on enemy airfields in the northwestern, western and southern directions. In just two days (October 11 and 12) and on the night of October 13, 166 enemy aircraft were destroyed at the airfields of Vitebsk, Smolensk, Orel, Orsha, Siverskaya and others.*** (27)

In fact, the enemy lost 10 aircraft on the ground. For the whole of October, and not for two days and one

night ... Other participants in the world war acted not much more effectively. So, during the famous "Battle of Britain" in the first four days of the German air offensive (from August 12 to 15, 1940), Luftwaffe pilots destroyed 47 English fighters at the airfields - at the cost of losing 122 of their own aircraft! And this despite the fact that the number of three Luftwaffe Air Fleets involved in the strike was greater than at the beginning of Barbarossa, and the only combat mission of this air armada was precisely the suppression of the Royal Air Force, while during the invasion of the USSR the Luftwaffe was forced to divide their already meager forces into gaining air superiority, fire support for ground forces, destroying roads, crossings and warehouses in the rear of the Red Army, operational reconnaissance, etc.

A drowning man clutches at straws. The absurd tale about the destruction of a huge grouping of the Soviet Air Force in one day, “from a raid, from a turn,” began to fall apart at the first contact with real facts. Therefore, in recent years, the pages of pseudo-historical literature devoted to the events of June 22, 1941, are simply littered with "devil's eggs" (slang for the German 2.5-kg fragmentation bombs SD-2). The downpour of these bombs, "gushing from the bomb bays of German bombers" and predetermined the supposedly unprecedented effectiveness of the strike on "peacefully sleeping airfields."

At the heart of such reasoning (alas, very, very common) is the following "logic". A rifle bullet is guaranteed to pierce a soldier's tunic. Therefore, 3 million rifle cartridges are enough to destroy an army of three million. In reality, everything is much more complicated. Not every bullet hits the target (and not every cartridge is spent on firing a shot at the enemy). In the second half of 1941, the Red Army used up 854 million rifle cartridges (and this is not counting the 1,750 million cartridges lost in the warehouses of the western military districts), but it was still very far from the complete destruction of the Wehrmacht ...

Seriously speaking, the bomber aircraft of the Soviet Air Force were armed with a wide variety of ammunition, with a total number of more than 60 types. There were also small-caliber fragmentation bombs designed to hit area targets, and unlike the Luftwaffe, in which the ill-fated "eggs" spilled over the target from a box loudly referred to as a "bomb cluster", a special rotational dispersion bomb (RRAB) was developed for the Soviet Air Force. Thanks to the installation of stabilizers at a certain angle to the air flow, the Rrab spun up in flight to such a speed at which the centrifugal force tore the shell, and 116 small AO-2.5 fragmentation bombs flew out of a large bomb. In addition, there was a variant of equipping the RRAB with glass beads with an incendiary mixture of the KS - in this case, the affected area reached one hectare The RRAB was tested, put into mass production, adopted by the Soviet Air Force and practically used during the bombing of Finland in the winter of 1939-1940 (there it was called "Molotov's basket"). In addition, there were special "pouring devices" with which the enemy was poured with a mixture of KS or a suspension of white phosphorus. In addition, there were “simple” ABK-500 underwing cassettes, which contained 108 incendiary ZAB-1, or 67 fragmentation AO-2.5 ... There was a lot of things, but neither to destroy, nor at least significantly weaken the German aircraft by attacking airfields and failed.

These are the facts. Facts do not need proof, but deserve historians to try to explain them. IN

In this case, there are no particular difficulties with the explanation. In the era of the Second World War, taking into account the capabilities of the weapons technology of that time, an air strike on enemy airfields was ineffective and very "expensive" measure.

First of all, it should be reminded once again that the main component of combat aviation is not airplanes, but pilots. A strike on airfields - even the most successful for the attacking side - only leads to the destruction of aircraft. The attacking side loses in the air over the airfield not only planes, but also pilots. Moreover, it loses irrevocably - a pilot shot down over the airfield will either die (it is almost impossible to use a parachute at low altitude), or will be captured. Both that and another in military language is called "irretrievable loss". Secondly, it is much more difficult to destroy an aircraft on the

ground than in the air. The flying object is vulnerable in flight. A single hole in the engine cooling radiator, a single control rod, interrupted by a fragment of an anti-aircraft shell, a piece of the elevator skin, torn out by a shell rupture of the smallest-caliber air gun, will lead to a fall or, in the most favorable case, to an emergency landing, in which the aircraft, likely to be completely destroyed. If this landing takes place on enemy territory (and during a raid on an enemy airfield, this will most likely happen), then the downed aircraft will go into the category of "irretrievable losses". Again - along with an extremely scarce pilot in the war.

An aircraft standing on the ground can be irretrievably destroyed only if it is directly hit by an air bomb. Shrapnel "wounds" from an aerial bomb that exploded to the side can disable the aircraft, but only for the duration of the repair. And this time - depending on the severity of the damage, the equipment and qualifications of the repair services - can be only a few days or even a few hours. Was it easy with the aiming equipment of that era to achieve a direct hit with an unguided bomb on an aircraft? According to the Main Directorate of the Red Army Air Force, the crew of the SB bomber, when bombing from a height of 2 km, on average achieved 39% of the dropped bombs in a rectangle of 200 by 200 meters; average

the circular probable deviation from the aiming point was 140 meters. (23) Simply put, there was no question of any targeted bombing on such a point target as an aircraft. Moreover, for targeted bombing, you need to find the target - but with this, in the event of a strike on airfields, there are big problems.

The simplest camouflage nets (or even a simple bunch of green branches) in combination with decoys (simple and cheap aircraft mock-ups made of plywood, boards and cardboard) make the task of visually detecting an aircraft on the ground almost unsolvable. It was possible to realize this "almost" by descending to extremely low altitudes (50-100 m), which is not at all easy (there were no automatic terrain tracking machines at that time) and very dangerous (at such a height, an aircraft can even be shot down by a dense rifle fire, not to mention anti-aircraft guns and machine guns). But that's not all - in order to exclude the destruction of the aircraft by fragments of the bomb dropped by it, the bombing had to be carried out either from a height of more than 300–500 meters, or using a delayed action fuse. However, the latter method turned out to be even less effective, since a horizontally flying bomb, after being dropped from an extremely low altitude, ricocheted and fell at a completely random point.

In addition to bomb weapons, the aircraft of the 41st year had small arms on board. The 20-mm air guns of the German "Messers", Soviet "donkeys", "yaks" and "silts" could cause serious damage to an enemy aircraft standing on the ground. But here the following, paradoxical, at first glance, problem arises: it is more difficult to get into a stationary plane than into a flying one in the sky. The problem is the timing of aiming and shooting. Having “tailed” the enemy and equalizing its own speed with that of the target, the fighter can fire from a quasi-constant distance indefinitely (until the cartridges run out). When firing at a fixed target, the pilot, who, in a gentle dive, at a very modest speed of 360 km / h (i.e., 100 m / s), attacks an aircraft standing on the ground, only 2-3 seconds: from the moment when it becomes possible aimed shooting (distance to the target 250-300 m), until the inevitable collision with the ground. Relatively inexpensive aircraft shelters (earth ramparts,

semi-caponiers) made attacking and aimed shooting at an aircraft even more difficult and even less effective. Last, and most importantly:

"There are two wills in the field." An old Russian saying is the best way to explain all the "pluses and minuses" of a strike on airfields. War is an armed confrontation between two sides, two opponents, each of which, in order to achieve victory, shows perseverance, courage and resourcefulness. And if an air strike on an airfield does not take place in the form of a leisurely execution of planes abandoned on the ground, but in the course of a battle (i.e., with active opposition from an armed enemy who does not want to recognize himself as defeated), then this tactic becomes deadly for the attacking side.

> The flight personnel of the aviation units that were attacked showed perseverance. The officers rushed to the cars, despite the explosions of bombs and machine-gun fire from attack aircraft. They pulled planes out of burning hangars. The fighters were running across the cratered field towards the impenetrable wall of the smoke screen and the continuous glare of explosions. Many immediately overturned in craters, others flew up, thrown up by a burst of bombs, and fell in a heap of burning debris ... And yet some managed to take off. With the courage of blind despair and anger, no longer following any plan, out of order, they entered into a single battle with the Soviet
>
> airplanes...

So N.N. Shpanov, in his famous book The First Strike (1939), described the expected first strike of Soviet aviation on German airfields. Even the hated Nazis were supposed to have "stubbornness and courage." Even in the Soviet military-patriotic "agitation", a strike on an enemy airfield was not portrayed as a miraculous "golden key" that opens the door to an easy, bloodless victory. It is important to note that the legend about the super-effectiveness of strikes against airfields was invented by Soviet "historians" retroactively.

Invented when it was necessary to find a relatively

decent explanations for the terrible defeat of the Soviet Air Force in the summer of 1941. The very limited possibilities of this tactical technique were well known to military specialists even before June 22, 1941. Known already in those years when N. Shpanov wrote his legendary story. The Soviet pilots and their

commanders had experience of the war in Spain, and absolutely correct conclusions were drawn from this practical experience:

> In the first period of the war, both sides carried out intensive operations on airfields with the aim of gaining air supremacy. Subsequently, however, they almost completely abandoned this. Experience has shown that operations on airfields produce very limited results.
>
> Firstly, because aviation is dispersed at airfields (no more than 12–15 aircraft per airfield) and is well camouflaged; secondly, airfields are covered by anti-aircraft artillery and machine guns, which forces attacking aircraft to drop bombs from a high altitude with a low probability of hitting; thirdly, the damage to the airfield by air bombs is so insignificant that it almost does not delay the departure of enemy aircraft; minor damage to the airfield was quickly repaired, and broken communications
>
> recovered.
>
> Very often, bombers dropped bombs on an empty airfield, as enemy aircraft had time to take to the air in advance. For example, in July 1937, the rebels made 70 raids on the airfield in Alcala in groups of up to 35 aircraft. As a result of these raids, 2 people were injured, two planes and a truck were destroyed ...

Spain was followed by fighting in China and at Khalkhin Gol. New combat experience again showed that a strike on airfields

inferior in effectiveness to other tactics in the struggle for air supremacy. At the well-known meeting of the highest command staff of the Red Army on December 23–31, 1940, the practice of war was summarized as follows:

> G.P. Kravchenko: The main thing is aerial combat… I am based on my own experience. During the operations at Khalkhin Gol, in order to defeat only one airfield, I had to fly out several times as part of a regiment. I took off with 50-60 aircraft, while at this airfield there were only 17-18 aircraft.
>
> CM. Budyonny: You spoke about losses at airfields, but what is the ratio between losses at airfields and in the air? G.P. Kravchenko: I believe that the ratio between losses at airfields will be as follows: in particular, at Khalkhin Gol, I had this - I destroyed 1/8 of the part on the ground and 7/8 in the air. G.M. Stern: And about the same ratio in other places.

With all this, in certain situations, such a tactical technique as a strike on airfields based on enemy aircraft may turn out to be appropriate (or even the only possible one). The meaning and purpose of attacking airfields can be formulated as follows, with the utmost simplification: the irretrievable loss of aircraft and pilots in exchange for gaining short-term air superiority. Attacked enemy airfields and air units based on them will quickly restore their combat capability, but there are situations in war when a few days or even hours decide the outcome of an operation. That is why, before the start of major offensive operations, massive raids on enemy airfields were often carried out. The temporary decrease in the activity of enemy aviation achieved by this was a significant help to ground forces at the most difficult stage for them to break through the enemy defenses.

Moreover, there were situations when attacks on airfields became the only possible means of armed

struggle. For example, at the beginning of 1941, both British and German bomber aviation switched to the tactics of night raids on enemy cities and military bases. Despite huge efforts (and some successes) in the creation and development of means of radar detection of aircraft in combat units, night fighters turned out to be powerless at that time in the confrontation with bombers invisible in the darkness of the night. Nothing else, except for extremely ineffective and leading to huge losses of raids on enemy bomber base airfields, was then practically impossible to undertake.

There are no exceptions to the rules (if they are real, correct rules). All apples always fall from the tree down to the ground. Not a single apple has yet flown to the sky. Planes, although much heavier than air, fly through the sky. But one should not conclude from this that the law of universal gravitation is inconsistent. It's just that, in addition to the force of weight, other forces also act on the aircraft. That's why he flies. Having done with this "philosophical digression", let's consider two real combat operations, which are often cited as evidence of the thesis of the high efficiency of strikes against airfields. Pearl Harbor. On the morning of December 7, 1941, Japanese carrier-based aircraft treacherously and without declaring war dealt a crushing blow to the American naval base with this poetic name (“Pearl Harbor”). Within an hour and a half, the US Navy lost so many heavy ships (battleships and cruisers) that not every major maritime power had. At the same time, 188 combat aircraft were destroyed on the ground. After this unheard of disaster, the very word "Pearl Harbor" became a household word. How did this become possible? Or, in other words, what was the reason for the unprecedentedly high (high in comparison with above) average efficiency of Japanese aviation? The first and, strictly speaking, exhaustive answer is that statistics is science of large data, given the numbers. The results of a single event can be very different from the average. Returning to the history of the grandiose ocean war of 1941-1945, we can

to state that nothing like this, nothing remotely reminiscent of Pearl Harbor, has ever happened again. Neither on American nor on Japanese airfields. The exclusivity of this event is

easily explained. First, there was an unprecedented concentration of attacking forces. The island of Oahu - a tiny speck on the map of the Hawaiian Islands - was attacked from six aircraft carriers by 353 Japanese aircraft. These figures cannot even be closely compared with the detachment of forces that the Germans allocated on the morning of June 22, 1941 to strike at Soviet airfields (each of which attacked, at best for the attackers, one, maximum two squadrons, i.e. no more than 15-20 aircraft - although in most cases, individual units or even individual pairs of aircraft participated in the raid). Secondly, there was a real surprise attack.

The naval base at Pearl Harbor was in a state of constant (i.e., normal, not increased due to the threat of attack) alert. The Japanese aircraft carriers drifted at a distance of 200 nautical miles from the base and were not detected by patrol ships guarding the sea area. At 7:55 local time, the crews of the American ships were in the morning formation - it was at that moment that bombs rained down on them. The reasons why the American command did not notice and / or did not draw the proper conclusions from the nomination of a powerful

aircraft carrier formation of the Japanese fleet, have been discussed many times and will be discussed for a long time in the military history literature. Many versions have been expressed (including the readiness of the US top political leadership to sacrifice ships and people so that the fury of the American people “boils like a wave” and allows Roosevelt to overcome the resistance of the “isolationists” in Congress). Be that as it may, for the personnel of the base, separated from the Japanese islands by 5 thousand kilometers of ocean expanses, the attack was a stunning surprise. These two circumstances -

surprise and a huge "pinpoint" concentration of the forces of the attackers - make it possible to characterize Pearl Harbor as a diversion without great exaggeration. A sabotage of a huge scale and huge consequences, but just a sabotage, and not a typical military operation.

The effectiveness of sabotage varies in a huge range - from zero to phenomenal success. So, for example, on July 30, 1943, the Belarusian partisan Fyodor Krylovich installed two magnetic mines with a clockwork in the echelon of gasoline tanks at the Osipovichi station. The unsuspecting Germans placed the echelon next to another echelon loaded with ammunition. After all this exploded, the Germans lost 5 steam locomotives, 33 fuel tanks, 65 ammunition wagons, 12 food wagons, 8 tanks, 7 armored personnel carriers, a coal depot, and many station buildings. Traffic in this area was completely paralyzed for two days. (116) It is unlikely, however, that there will be a sane person who needs to prove that not every one of the 200 thousand partisans of Belarus has achieved such success ... The word "sabotage" is related to the defeat at Pearl Harbor in another

aspect. The base command saw the main threat not in the sky (where no one expected the sudden appearance of hundreds of enemy aircraft), but in the sea, from which Japanese saboteurs could come ashore in the darkness of the night. Therefore, the aircraft at Pearl Harbor not only were not dispersed along the edges of the airfields, but, on the contrary, were concentrated in the center of the airfields under reliable protection. On the morning of December 7, 1941, this circumstance also contributed to the high effectiveness of the Japanese strike.

A final remark related to the history of Pearl Harbor relates to the casualties of the attackers. The losses were by no means negligible. Of the 183 aircraft of the first "wave" 9 were shot down, of the 170 aircraft of the second "wave" 20 were shot down (more than one tenth). In total, 29 aircraft were irretrievably lost, and another 74 were damaged. In total, 1 aircraft out of 12 that took part in the raid was irretrievably lost. Running a little ahead, we note that on June 22, 1941, the Germans irretrievably lost "from enemy action and for unknown reasons" 62 combat aircraft, i.e., on average, one aircraft for 65 sorties (although in this case more than half of the sorties were not related with attacks on airfields). The casualty rate is five times lower than that of the Japanese in the raid on Pearl Harbor. If Pearl

Harbor was a “point” was a one-time strike, in principle, incomparable with the events of the longest day of the 41st year, then the operation “Moked” (which can

translated from Hebrew as "focus", "center of effort"), carried out by the Israeli Air Force on June 5, 1967, on the first day of the so-called "six-day war", is well worth considering in the context of our book.

During the day (the first bombs fell on Egyptian airfields and 7.45, the last planes returned to their bases by 8 pm, when real night falls in the Middle East in June), the Israeli Air Force in five "waves" completed 352 sorties and attacked a total of 18 Egyptian airfields. Based on the pilots' reports and aerial photographs, enemy losses were determined in the following figures: - Tu-16 bombers 30 out of 30; - IL-28 bombers 27 out of 27; -
MiG-21 fighters 90 out of 102; - MiG-19
fighters 20 out of 28; - MiG-17 fighters
75 out of 96; - fighter-bombs. "Su-7"
12 out of 16. Total 254 out of 299.
Attacks on the airfields of Syria and
Jordan began in the afternoon.
A total of 122
sorties were made and 8 airfields were attacked. Destruction announced: - Il-28 bombers 2 out of 2; - MiG-21 fighters 30 out of 60; - MiG-17
fighters 20 out of 35; - Hunter fighters
20 out of 24. In total, 474 sorties
were carried out for attacks on
enemy airfields, during which 326
enemy aircraft were destroyed. Combat (excluding accidents for technical reasons) irretrievable losses amounted to 18 aircraft - within one day, the Israeli Air Force lost 9% of the total number of serviceable combat aircraft (Luftwaffe losses on June 22, 1941 as a percentage of the number of combat-ready aircraft were three times less) . In terms of the number of sorties - 1 shot down for 26 sorties (2.5 times more than the Germans on June 22). The losses are very, very tangible, however, the command of the Israeli Air Force in their calculations proceeded from the inevitability of the loss of 20% of the attacking aircraft. (149, 150)

The reason why the Israeli command decided to resort to a tactic fraught with great losses is quite understandable - there was simply no other option. The inhabited (not counting the waterless and deserted Negev desert in the south of the country) part of the territory of Israel "within the borders of 1967" was a "densely populated beach" about 18-20 km wide. The flight time of a subsonic strike aircraft from advanced Egyptian airfields in the Sinai to Tel Aviv was 10 minutes. The invariably peaceful Soviet Union, among other things, provided its Middle Eastern friends with 30 Tu-16 bombers. In domestic literature, this aircraft is characterized as "medium long-range". Yes, for the mid-60s, a bomber with a take-off weight of 80–90 tons could be considered “average”. Recall, however, that the American "flying fortress" B-17 had a maximum take-off weight of 27 tons, and the heaviest modifications of the German "Ne-111" weighed less than 14 tons ... Israel could not allow the appearance of such an armada over its densely populated cities, but practice of all wars and military conflicts of the 20th century, without exception, convincingly proved that no air defense is able to prevent a part of the attacking aircraft from breaking through to the target (in reality, the destruction of 10–20% of enemy aircraft could be considered a huge success). In such a situation, the Israeli Air Force simply had no choice but to try to destroy enemy aircraft before they could take to the skies. The Israeli Air Force has been preparing for a preemptive strike on Egyptian airfields for at least two years. The idea of the

operation was based on the idea of the priority destruction of the runways (runways) with the subsequent execution of the "ground-bound" aircraft. The location of the Egyptian airfields was no secret to Israel, as they were mostly former British airfields built in the 1930s-1950s. There were few airfields (more precisely, at the mercy of the Kremlin, a backward semi-feudal country had an unbelievably large number of combat aircraft). Although in total the Israeli Air Force appeared in the sky over 18 airfields, three-quarters of all sorties (267 out of 352) fell on the 7 main airfields based on Egyptian aircraft. Virtually all

the deadly armada was "tied" to two dozen runways. It was this circumstance that gave the Israelis a chance of success.

All types of reconnaissance established the location of airfields, runways, parking lots and shelters for aircraft. With some errors, but a selection of real aircraft and false targets (dummy models) was carried out. In the desert area, for the training of Israeli pilots, "runways" were marked on the ground, exactly corresponding to the real ones. It was not the runway that was to

be bombed in an arbitrary place, but strictly defined points, the destruction of which made it impossible to take off from the damaged runway in any direction. Each pair of pilots knew a specific point on a specific strip of a certain airfield that she was to attack, the direction of approach to the target, turn for the second approach, the direction of the third attack, etc.

The Mediterranean Sea provided significant assistance in ensuring the surprise of the first strike. The presence of a huge water surface allowed the first "wave" of Israeli aircraft to fly most of the route at an extremely low altitude of 30 meters - without automatic terrain tracking, this was only possible over the sea. The planes not detected by radars flew much further than the meridian of the target, then turned around over the sea and attacked the Egyptian airfields "from the rear", from the west (in relation to June 22, 1941, this is equivalent to the fact that German planes would have appeared over the border airfields from Minsk).

Unlike Pearl Harbor, where the Japanese struck with a huge "cloud" of aircraft, each "wave" of the Israeli Air Force raid was actually a "chain" of successive attacks of individual links (from 3 to 5 aircraft each). So, for example, the most important Egyptian airfield Abu Suer (27 Il-28 tactical bombers and 19 newest MiG-21 fighters were based there) was attacked at 7.45, 7.55, during what is commonly called the "first wave", 8.10, 8.25, 8.40, 8.55, 9.10. Seven strikes at intervals of 10–15 minutes, 32 sorties. Each link dropped a bomb load on the runway, after which, in three passes, it shot planes from the onboard guns and went home, freeing up space for the next link. After the attack aircraft returned to base, they were refueled at a frantic pace,

ammunition and prepared for the next flight. The time standards for post- and pre-flight preparation established by aircraft manufacturers were reduced by 2.5 times. The second "chain" of strikes covered Abu Suer between 10 and 11 o'clock in the morning: another 18 sorties of four links. The last two planes attacked Abu Suer at 18:00. Total: 52 sorties on one airfield. The neighboring Fayyad airfield was attacked in four "waves": six links in the first "chain" (29 sorties in the period 7-45 to 9-10), 7 sorties in the second "wave", 4 in the third, 10 in the evening fifth "wave ". A total of 50 sorties per airfield.

Contrary to popular misconception, in June 1967, not a single American-made combat aircraft was in service with the Israeli Air Force. Israeli military aviation at that time was a flying exhibition of the achievements of the national economy of France. There were "exhibits" of five different types, ranging from the hopelessly outdated Hurricane (the first - still with a direct subsonic wing - a serial French jet fighter; discontinued in 1954) to the latest supersonic Mirage. Fortunately for the Israelis, all five types of French aircraft were “old-fashioned” equipped with powerful cannon armament (from four 20-mm cannons on the Hurricane to four 30-mm cannons on the heavy twin-engine Votours), which was the best match for the tasks operations. The main difference between the armament of the 1950-1960 fighters from their predecessors of the era of the beginning of World War II was not in the increased caliber of guns and / or the number of barrels, but in equipment. in principle Semi-automatic gyroscopic sights (coupled on new aircraft with radio rangefinders) freed the pilot from the need to calculate (more precisely, intuitively guess) the necessary lead - all corrections related to

the mutual three-dimensional movement of the aircraft and the target were made by automation, based on amazingly beautiful in its ingenious simplicity analog electro-mechanical computers. The new sights not only increased the probability of hitting, they changed the very aerial shooting - it new sighting "technology" of became possible to shoot from long distances (up to 800-1000 meters), at

cross courses. In fact, aviation small arms, which in the early 60s, other theorists hastened to declare an anachronism, gained a "second wind". To destroy concrete runways, Israeli aviation used bombs of a very

"modest" caliber (70-120 kg), but in the maximum possible quantity according to the performance characteristics of the aircraft. It was decided that a high probability of defeat was more important than the depth of the craters on the runway - the calculation was based on the fact that the ground services of the airfields would not be able to restore even the most minimal damage at the pace set by the continuously attacking Israeli aircraft. At the same time, special concrete-piercing bombs with a rocket booster were used to strike at especially important airfields. This ammunition, after being dropped at low altitude, was stabilized by a brake parachute, which ensured a meeting with the runway at a strictly defined angle; after that, the rocket booster "driven" the bomb body made of high-strength steel under the concrete coating, and only after that the warhead was undermined. As a result, not a "hole" was formed on the runway, but a "mound" of rearing fragments of concrete pavement, after which the runway became absolutely "impassable" for multi-ton aircraft with a takeoff speed of 200-250 km / h. And yet, the main factor that made possible the phenomenal success of Operation Moked was the extreme carelessness

command and ... let's say politely - low motivation for personal

composition of the enemy. The Egyptian command (i.e., Soviet military advisers) did not learn the slightest lesson from recent military history, and the operation to “throw Israel into the sea” was planned as a kind of repetition of the Finnish (“winter”) war in a hot climate. No one thought about a possible preemptive strike by an enemy “doomed to be slaughtered”. The brand new MiG-21s dazzlingly sparkled with duralumin wings under the rays of the African sun - they did not even bother to paint them with camouflage paint (not to mention camouflage nets and shelters). The numbers of Israeli aviation losses also speak volumes: in the first "wave" 8 aircraft were irretrievably lost, in

the second - zero. The dynamics are very interesting and by no means trivial. At Pearl Harbor, everything was exactly the opposite: 9 Japanese aircraft were shot down in

the first "wave" and 20 - in the second. Awakened by a sudden strike on “peacefully sleeping airfields”, American pilots “with ***the courage of blind despair and anger, no longer following any plan, out of order, entered into a single battle with enemy aircraft ...”*** Something else happened at Egyptian airfields, and, judging by According to the reports of Israeli pilots, the second "wave" practically did not meet either anti-aircraft fire or missile launches. In the afternoon, the same situation was repeated in the skies of Syria and Jordan: 7 Israeli aircraft were shot down in the first strike, 3 in the second. It remains to be assumed that the "fighting spirit" of the Arab anti-aircraft gunners was no higher than the similar spirit of the tankers and infantrymen. Here it would be appropriate to recall that the organized resistance of the Arab armies was broken within two or three days, and the total duration of the “six-day war” was determined by the time it took the diplomats of the great powers to agree on the conditions on which Moscow agreed to recognize the defeat of its puppets. Concluding the brief review

of the Moked operation, it should be noted once again that all the numbers of Arab aircraft destroyed on the ground, given above, are based on the statement of one side. Yes, judging by the military operational result achieved (after June 5, not a single bomb fell on the cities of Israel), the reports of Israeli pilots were not the usual “hunting stories” in such cases, and most of the runways were disabled for a long time. As for the number of aircraft actually destroyed on the ground, it could be somewhat less than declared. We are led to this assumption by the data posted on the official website of the Israeli Air Force that during the "six-day war" 60 enemy aircraft were shot down in air battles and three more aircraft were destroyed by Israeli air defense forces. ("60 enemy planes were shot down in dogfights. Three more planes were brought down by the Israeli AA forces"). Before being shot down in the air, these planes had to survive under a hail of Israeli strikes on June 5, and even be close to a serviceable runway ...

Thus, the unusually high (high in comparison with the operations of the Second World War) effectiveness of strikes against airfields, achieved by the Israeli Air Force on June 5, 1967, can be explained by the following factors:

- the attachment of jet aircraft to concrete runways, the minimal damage to which made it impossible to take off multi-ton aircraft with takeoff speeds of 200 km or more /

hour;

- the concentration of Arab aircraft on a relatively
a small number of airfields;

- lack of proper camouflage of aircraft; - thorough multi-year
training of the Israeli Air Force
(including accurate identification of all enemy airfields);

- the surprise of the first strike, ensured by the careful preparation of the attackers and the extreme carelessness of the defenders who did not intend to defend themselves;

- extremely low activity of ground air defense of airfields; - a new generation
of airborne sighting equipment, which ensured both high accuracy of bombing on the runway and high efficiency of firing at aircraft;

- significantly increased power of small arms
aircraft.

Returning to the events of June 22, 1941, we can unequivocally state that the first and last two factors could not have existed on that day in principle. The I-16 fighter of the latest (i.e., the heaviest) modifications had a takeoff weight of less than 2 tons and a takeoff speed of 130 km / h, a takeoff run of 210 m, a run length of 380 m. The runway for a fighter of this class could serve as a flat clearing, compacted with a skating rink or lined with easily removable metal panels. An aerial bomb weighing 50 kg (the most massive ammunition of German bomber aviation; the next caliber in the Luftwaffe was a 250 kg bomb, there were no “hundreds” at all) left a funnel with a diameter of 10–15 meters in the ground. Fifty mobilized men from a neighboring village could fill it up in half an hour. Manually. With the use of technology, it was even easier to restore the unpaved runway destroyed by the raid. That is why attempts to disable the airfield by destroying the runways were extremely ineffective in that era. Strictly speaking, they were extremely rarely dealt with, and an attack on airfields primarily involved an attack on

aircraft.

This circumstance alone makes it completely meaningless to directly transfer the results of June 5, 1967 to June 22, 1941 - the Germans could not “chain” Soviet aviation to the ground with one massive blow to the runways of airfields, in principle. This conclusion hardly deserves discussion. It is much more important to try to find out the real state of affairs with other success factors: the number of airfields, the dispersal and camouflage of aircraft, the surprise of the enemy strike (German aviation). These are the questions that will be addressed in the next chapter.

Chapter 23

We will not even start a discussion on the topic: “Did Stalin believe in an agreement with Hitler?” Not funny, stupid and disgusting. Those who wish can turn back a few pages and take another look at the long list of Soviet Air Force commanders who were arrested and shot on the eve of the war. Something, but excessive credulity was not included in the list of Comrade Stalin's vices. Of course, Stalin

had detailed information about the concentration of German troops near the borders of the USSR, of course, he was not an idiot (as he was portrayed by the entire domestic and, quite strangely, most of Western historiography, which spread stories about the fact that Stalin "was afraid to give Hitler a reason for an attack") and perceived the information quite adequately. Yes, many of his actions in the last days and hours before the start of the war are still incomprehensible to us. But this does not mean that Stalin is an idiot. It's just that our knowledge of the dark abysses of Soviet history is still very, very small.

As for the notorious "surprise attack", here it is necessary to clarify the terminology. There was no strategic surprise by definition. The Soviet Union, its army, the military industry (there was practically no other), the top military-political leadership of the country was intensely, tirelessly and adamantly preparing for the Great War. This is evidenced by hundreds of thousands of documents, evidenced by millions of living witnesses of the events. If this fact still needs to be proven to someone, then it is no longer worth proving ... There was also no operational surprise. In the second half

of June 1941, the Red Army was in a state of immediate preparation for war. To the war that will begin in the coming weeks (or even days). In June 1941, the imminent start of hostilities was not in doubt for almost anyone - from generals in Moscow to soldiers in the border units. Of the great many testimonies of the participants in the events, we will cite only one -

recently published memoirs of L.I. Toropova. (164) On the eve of the war, the young cadet Toropov studied flying at the famous, oldest in Russia, Kachinsky flight school. A few days before June 22, a lecturer came to the cadets:

> ... He introduced himself as a lecturer of the Central Committee of the CPSU. The lecture was sensible and informative. It was literally four or five days before the start of the war. And the end of his lecture was
>
> something like this: “Comrades, there was a statement from TASS on June 14, you probably know [about it]. Nevertheless, war with the Germans is inevitable and will be. But, you have no idea how close we are to this
>
> war! This is how I finished the lecture. Of course, we did not attach any importance to these words ...

Carefully prepared by Soviet pseudo-historical propaganda, the reader will easily continue the phrase: they didn’t believe because the radio was shouting about the non-aggression pact, and everyone who didn’t believe in this pact was dragged to the dungeons as “provocateurs”. Alas, my friends, this time you did not guess. This phrase ends in a completely different way in the memoirs of an eyewitness and a participant in the events:

> because for more than a year we were told: - War
> will be with the Germans! There will be war!
>
> And despite the agreements, we are already used to it. And I I remembered these words of his only when the war began.

Pay attention: not “the Germans will attack us”, but “there will be a war with the Germans” ...

Now, from memories (and memory can fail any person), let's turn to miraculously preserved (that is, not destroyed in a timely manner) documents. It turns out that starting from June 16–17, 1941, orders to put the troops on high alert were pouring in one after another. Order of the commander of the Baltic OVO No. 0052 dated June 15, 1941.

... From the first hour of hostilities, organize the protection of your rear, and immediately detain all persons who inspire suspicion and quickly establish their identity ... Disperse and camouflage aircraft at airfields in forests, bushes, preventing formation in a line, but maintaining full readiness for departure. Parks of tank units and artillery should be dispersed, placed in the forests, carefully disguised, while maintaining the ability to assemble on alarm in a timely manner ... The army commander, corps and division commanders should draw up a calendar plan for the execution of the order, which will be fully completed by June 25 this year. G.

(50, pp. 11–12)

Directive of the Military Council of the Baltic OVO No. 00224 of June 15, 1941.

In the event of an enemy violation of the border, a sudden attack by his large forces or an overflight of the border by an air formation, I establish the following notification procedure ... The report should be sent through radio stations 11-AK or RSB on wave 156. For timely receipt of the report, the receivers of all formation headquarters from 17.6.41 .should be on the wave 156…

(50, pp. 11–12)

Order of the commander of the Baltic OVO No. 00229 dated June 18, 1941.

In order to quickly bring to combat readiness district theater of operations I ORDER:

To the head of the air defense zone, by the end of June 19, 1941, to bring the entire air defense of the district to full combat readiness ... By July 1, 1941, complete the construction of command posts, starting from

battery commander ***(anti-aircraft.*** - M.S.) to the commander of the brigade area (air defense) ... Not later than the morning of June 20, 41, at the front and army command posts, send teams with the necessary equipment to organize communication centers on them ... Systematically check communications with command posts ... Designate and prepare teams of signalmen who should be ready by the morning of 20.6.41, by order of the commanders of the formations, to take control of the communication centers approved by me ...

Determine points for organizing field depots of anti-tank mines, explosives and anti-personnel barriers in the sector of each army . To concentrate the indicated property in organized warehouses by 21.6.41…. Create mobile anti-tank mine combat detachments in the Telsiai, Siauliai, Kaunas and Kalvary directions ... Readiness of the detachments by 21.6.41 ... Approve the plan for the destruction of bridges by the military councils of the armies. Deadline 21.6.41... Select all gas tanks from the parts of the district (except mechanized and aviation) and transfer them 50% each to the 3rd and 12th mechanized corps. Completion date 21.6.41…

On the cover of Combat Documents Collection No. 34 (from which these orders are quoted from pp. 11-25) is a blue stamp: "Declassified." Number of the Directive of the General Staff on declassification and date: 30.11.65, 1965. For decades, the shamans of the official military-historical "science" knew - or at least should have known - the contents of the documents of June 1941, but at the same time they continued to tell us stories about a "sudden attack" and "a peacefully sleeping Soviet country..." Unfortunately , SBD No. 34 is the only

collection of combat documents of border military districts / fronts, which included at least several documents from the period before June 22, 1941. All other collections begin immediately on June 22, with a "surprise attack". Everything that preceded this notorious "surprise" was safely passed over in silence. However, taking into account the transcendent level of centralization of adoption

decisions in the Stalinist USSR, there is not the slightest reason to consider the situation in the Baltic OVO to be something unique. Commander of the PribOVO F.I. Kuznetsov (as well as his naval namesake N.G. Kuznetsov) acted in strict accordance with the instructions that they received from Moscow. Their neighbors received exactly the same instructions. It's just that the relevant documents of other districts either disappeared or were duly classified in good faith in a timely manner. However, it is impossible

to keep everything secret. In the most “stagnant years” (in 1977), the memoirs of Colonel Belov (commander of the 10th SAD - one of the three completely defeated air divisions of the Western OVO) were published about the first day of the war. Essay title: "Hot Hearts". The tone of the story is in line with the title. Nevertheless, the following information also fit on five pages of text: ***“On June 20, I received a telegram with an order from the commander of the district air force: put the units on combat readiness*** (emphasis added by me. - ***M.S.), prohibit vacations for command personnel, recall those on vacation in part ... The regimental commanders also received my order: to disperse the aircraft beyond the borders of the airfield, do not let the personnel out of the camp location ... ” (44)*** In the November 1988

issue of the Military Historical Journal (the official press organ of the USSR Ministry of Defense) published a report by the commander 7th Panzer Division (6th Mechanized Corps, Western OVO) Major General S. Borzilov dated August 4, 1941. The commander of the defeated division, who emerged from the encirclement with a handful of soldiers, does not hide the fact that ***“... On June 20, 1941, the corps commander held a meeting with the command of divisions, at which the task was set to increase combat readiness, that is, it was ordered to finally equip shells and magazines, put them in tanks, strengthen the security of parks and warehouses, check once again the areas where units are assembled on alert, establish radio contact with the headquarters of the corps. Moreover, the corps commander warned that these activities should be carried out without fuss, not to***

tell anyone about it, to continue studies according to plan ... ”
The report of the head of the 3rd department (military counterintelligence) of the 10tl

volume only in 2008. It follows from the report that the 9th SAD of General Chernykh, adjacent to the 10th MAD of Colonel Belov, received exactly the same order: ***"The 9th air division stationed in Bialystok, despite the fact that it received an order to be on alert from the 20th to the 21st..." (151)*** And here are the memoirs of one of the senior commanders of the 9th SAD (lieutenant colonel V. Rulin, at the beginning of the war - commissar of the 129th IAP):

> The operational intelligence reports of the headquarters of the Western OVO became more and more alarming .... Unexpectedly, on June 21, the entire leadership of the regiment was called to Bialystok ***(i.e., to the***
>
> ***headquarters of the 9th SAD.*** - M.S.). In connection with the beginning of the exercise in the border military districts, it was proposed to disperse all the materiel available in the regiment before dark, to ensure its camouflage. When at the end of the day the regiment commander returned from the meeting to the camp, the work began to boil. All planes at the airfield were dispersed and camouflaged
>
> ***(132)***

Aviation units of 43 IAD and 13 BAD, stationed in the region of Minsk and Bobruisk, were located at a distance of hundreds of kilometers from the border. They could not become the object of the first "sudden" strike (and did not become such in reality). Nevertheless, there was intense preparation for hostilities. Neither these divisions nor their commanders were "peacefully sleeping". Major General G. Zakharov, commander of the 43rd IAD: ***"In mid-June, all vacationers were recalled and returned to units, I canceled layoffs on Saturday and Sunday, the number of duty units and squadrons was increased ..." (55)***

Not after, but before the first shots, 13 dietary supplements were alerted at the border. The division commander, Major General F. Polynin testifies:

> On Saturday, June 21, 1941, a team of artists arrived at our air garrison from Minsk. Not so often we were indulged in the attention of theatrical artists, so the House of the Red Army was overcrowded (in brackets

we note that on the evening of June 21, 1941, commanders of various ranks found themselves in theaters and concert halls. As per command. Or - on command. This is a very strange detail of the events on the eve of the war)… It was already past midnight when, after thanking our dear guests, we sent them back to Minsk. I just got home and went to bed when the phone rang. - Combat Alert! - I hear the excited voice of the duty officer at the headquarters. - Where did you report it? - From Minsk. The duty officer immediately handed me a telephone message from the District Air Force Headquarters. I read: "Open the package, act as prescribed." Pick up the phone, contact the commanders regiments.

They are already ready (that is, at 1-2 am at the “peacefully sleeping airfields” of 13 dietary supplements, no one was sleeping), they are waiting for a combat order. The conversation in cipher is extremely brief. Such and such goals ***(such a conversation could be brief only on the condition that the targets were reconnoitered in advance, studied, the routes of the first strikes were mapped.*** - M.S.) meeting with fighters there That…

Two words deserve the closest attention: “Open plastic bag".

The army lives according to charters, orders and instructions. This is her well-known weakness (and the basis of numerous jokes about stupid martinets). This is also its great strength - in a critical situation, the commander does not need to spend precious minutes on long reflections, you just need to clearly follow what is prescribed. The actions necessary in the first hours and days were developed, coordinated and approved in a document called "Mobilization, Concentration and Operational Deployment Cover Plan". Such plans were drawn up in every district, every army, every corps, and so on down to the regiment. Sealed package ("red package")

was kept in the safe of the headquarters of each formation of the Red Army. Upon receiving a combat alert signal, commanders of all levels had to open the package and, without much deliberation, do what is written there. However, the top leadership of the Red Army (Timoshenko and Zhukov, and in fact Stalin), instead of a short order of four words: “to put into action a cover plan” - at midnight on June 21, 1941, they sent a long essay to the border districts, which was included in historiography under the name “Directive No. 1".

The discussion and search for the hidden meaning of this work has been going on for more than half a century. Some argue that the main thing in the Directive is the requirement ***“not to succumb to provocations”.*** Others reasonably object, pointing to the phrase ***"to meet a possible German strike."*** Still others rightly point out the ambiguity of the expression "meet a possible blow." How to meet? where to meet? at what frontiers? what forces? what are the plans? In fact, on the fateful evening of June 21, 1941, the top military-political leadership of the USSR invited their subordinates to solve the puzzle. Unravel in the conditions of the most severe shortage of time and with a very high probability of arrest and execution in case of an incorrect answer. And all this - instead of a simple, short and clear order to put the cover plan into action. This mystery is great.

As long as the relevant documents of the country's top leadership are securely hidden in departmental archives inaccessible to independent historians, there is no and will not be a convincing solution to the "mystery of June 21". Many suggestions have been made. I expressed my opinion in expanded form in the book “June 23:“ Day M ””. (152) Without digressing further into the discussion of complex military-political issues, let us turn to the consideration of real facts.

The decision to put the cover plan into effect was made at different times, in an unorganized manner, with an eye to possible “consequences”. Nevertheless, in a number of districts, formations and units, "red packets" were opened BEFORE the first shots were fired at the border. In the context of this chapter, we are primarily interested in the situation in the Western OVO, whose aircraft suffered the greatest losses from the "sudden strike on airfields." Large number of documents

indicate that the relevant orders were given and received in the ZAPOVO. The Journal of Combat Operations

(ZhBD) of the Western Front records:

> At about one in the morning on June 22, a cipher was received from Moscow with an order to immediately put the troops on alert in the event of a German attack expected the next morning. At about **02:00-02:30** ***(hereinafter it is***
>
> ***emphasized by me.*** - M.S.) a similar order was issued in cipher to the armies, units of the fortified areas were ordered to immediately occupy the fortified areas. At the signal “Thunderstorm” (an ***interesting coincidence with the title of the book by I. Bunich.*** - M.S.), **the “Red Package” was put into action, containing a plan to cover the state border ...**

(10, p. 8)

The specified time (2 hours - 2 hours 30 minutes) is also confirmed in the documents of the units and formations of the district troops. So, in the report of the commander of the 7th TD Borzilov, already mentioned above, we read:

> **. . . On June 22, at 2 o'clock,** a password was received through a communications delegate about a combat alert with the opening of the "red package". After 10 minutes, a combat alert was announced to parts of the division, and at 4 hours 30 minutes. parts of the division concentrated at the assembly point for combat alert ...

This report is fully confirmed by the memoirs of the commander of the 10th SAD Belov:

> ... At about **2 am on** June 22, I give the “Combat Alert” signal. It is transmitted by telephone, duplicated by radio. A few minutes later, **confirmation** was received from the three regiments about the receipt of the signal and **its execution.** There was no confirmation of receipt of this signal from ShAP 74 ***(yeah! here they are, German saboteurs who cut all the wires on the entire front*** - M.S.) Colonel Bondarenko flew to 74

> ShAP on a Po-2 aircraft ***(and indeed, how can an air division be “deprived of communication”, the aircraft of which are in themselves an excellent means of communication.*** - M.S.) **at 3 o’clock in the morning** and upon arrival announced a combat alert ...

No one slept on that fateful night and in the 9th SAD, which suffered the greatest losses, which is confirmed by unique eyewitness accounts. IN AND. Olimpiyev, born in 1922, one of the very few conscripts of 1940 who were lucky enough to live to see the Victory. In Bialystok, Sergeant Olimpiyev served as the commander of the telephone department of the headquarters of the 9th SAD. That is why, despite such a modest title, Vsevolod Ivanovich saw and knew quite a lot. In his memoirs (posted on the I Remember website), he writes:

> ... Returning from duty to the barracks late in the evening of June 21, 1941 with a leave of absence for Sunday in my pocket, I was already dozing when, through my sleep, I heard a loud command - "in the gun." He glanced at his watch, **it was about two in the morning.** The combat alert did not surprise us, since the next military exercises were expected ... It was almost dawn when our special truck, designed for unwinding and winding the cable, reached the military airfield on the outskirts of the city. Everything was quiet. **The 37-mm anti-aircraft guns disguised in caponiers along the airfield** were striking ***(and how many lamentations there were about the lack of anti-aircraft guns at the airfields of ZapOVO.*** - M.S), the crews of which were armed with carbines and wore helmets ...

How typical was this picture for all other parts of the Air Force of the Western District / Front? The question is difficult. Front Commander General of the Army D.G. Pavlov (who was shot exactly one month after the start of the war) , in his testimony during the investigation, gave the following ***answer :***

fully put on combat readiness and dispersed at airfields in accordance with the order of the people's commissar of defense. (67)

Yes, there were other situations on that strange night, other actions and inactions. In any case, at many airfields, a combat alert was announced at least an hour BEFORE the enemy attack. And this circumstance alone radically distinguishes the events of June 22, 1941 from June 5, 1967, or Pearl Harbor. Is it a lot - an hour of

time? What could be done in such time? ***The question is reasonable, and the answer to it is very simple - it is enough to carefully re-read the statutory*** norms: ***up to 1 h 30 min. The terms of combat readiness of the air defense units on duty were 5-10 minutes, the units as a whole - 2-4 hours. ”(3) It*** is probably worth explaining what it means constantly

the expression “duty link” found in reports and orders:

> When on duty at airfields for fighters, it was
> three levels of combat readiness were established: No. 1, 2 and
> 3. They ensured the take-off of fighters: from
> readiness No. 1 - immediately: from
> readiness No. 2 - in summer after 2-3 minutes, in winter after 4-6 minutes;
> from readiness No. 3 - in summer and winter in 15–20 minutes.

This is aviation. The fastest branch of the military. These are not mechanized corps, kept in peacetime on a reduced staff, with less than half of the prescribed vehicles; the terms for bringing them to full combat readiness were calculated in days. ***“The Air Force was in easier conditions of mobilization, since the flight personnel of the units were mainly kept in wartime states. With the announcement of mobilization, it was required to call only a certain number of administrative, technical and service personnel. Therefore, the terms of combat readiness of the air regiments were no more than 2-4 hours.*** This is not all I came up with. This

military historians of the General Staff wrote in their collective work in 1992. (3)

Such was the case with suddenness. Now let's look at airfields.

According to the canonical version adopted in Soviet historiography, Luftwaffe aircraft attacked 66 airfields based on the Soviet Air Force. 66 airfields - are these ALL airfields in the western districts? Or most of them? Or at least one fifth of the total? Strictly speaking, 868 aircraft (637 bombers and 231 fighters) took part directly in the first attack on Soviet airfields, which attacked not 66, but 31 airfields. But let's not find fault with the petty "mistakes" of Soviet historians. We will try to understand the picture of the development of the airfield base of the air force of the western districts. Figures for the number of airfields rarely match even within one book by one author. Perhaps

this is due to the fact that in the era of aircraft with a take-off weight of 2 tons and a landing speed of 130 km / h, the very concepts of “operational airfield”, “landing site” were somewhat blurred, because in summer any even plane could be successfully used in this capacity. field after the minimum

preparation.

In the autumn of 1940, it was decided to increase the number of airfields in the Red Army Air Force to three per air regiment (1 main and 2 operational). This decision, like thousands of similar decisions of the party and government to prepare the country for the Great War, was stubbornly and persistently carried out. On March 24, 1941, the Central Committee of the All-Union Communist Party of Bolsheviks and the Council of People's Commissars of the USSR adopted another resolution on the construction and reconstruction of existing military airfields. Only in the territory of the western military districts it was supposed to build 672 (six hundred and seventy-two!) airfields. To implement such a grandiose construction program, the Main Directorate of Airfield Construction was specially created ... the NKVD. Yes, it was Comrade Beria and his countless army of Gulag slaves who were entrusted with this "construction of the century." And they worked hard: in the period from April 8 to July 15, in addition to the existing ones, 164 airfields were built in the western districts (25 i

Pribaltiysky, 55 in the Western, 56 in the Kiev and 11 in the Odessa districts); in total, by the end of 1941, 513 new airfields were built, including 138 with concrete runways. (23) These are the figures for new construction.

Of course, military airfields in the invariably peaceful Soviet Union began to be built long before the 41st year. In total, as of June 22, 1941, there were 614 airfields in the western districts: (23)

- 86 in Leningradsky; -
58 in the Baltic; - 213 in
the Western; - 150
in Kievsky; - 107
in Odessa.

Particular attention should be paid to the airfield network of the Western OVO, in which 24 air regiments accounted for a total of 213 airfields. For the most attentive, I can provide an archive link, which the compilers of owls. secret collection "Air Force of the Great Patriotic War in Numbers" is confirmed by the mentioned figures: TsAMO, f.35, op.28737, d.1, ll. 7,

33, 116, 292, 294. Rumors that most of the airfields were at a distance of "a cannon shot from the border" are also extremely exaggerated. In reality, the problem was just different: to the west of the Riga-Minsk-Rovno-Mogilev-Podolsky line, i.e., in the territories of Eastern Poland and the Baltic States annexed in the 1939-40s, there were relatively few airfields (few compared to the huge requests of the command of the huge Soviet aviation). Requests were determined by the general strategic plan of the Red Army. The exact details of this plan are still unknown, but in the Special Communication of the 3rd Directorate of the NPO No. 2 / 35064 dated June 25, 1941, among the description of the defeat of the North-Western Front, such an interesting line is found: “In connection with the withdrawal of units, there are not enough airfields, ***so how airfields were mainly built in the southwestern places of the Lithuanian and Latvian republics with the expectation of***

an offensive ... " (151) Directly in the border zone (20–30 km from the border), only field operational airfields of fighter regiments were deployed - and such deployment is a mirror image of

corresponded to the deployment of fighter and assault groups of the Luftwaffe. By the way, in 1941-42, quite a few orders were issued in which the commanders of fighter units were categorically required to bring airfields closer to exactly this (20-30 km) distance from the front line. Returning to June 22, 1941, we note that with the rarest, single exceptions, not a single airfield was - and could not be - subjected to artillery fire. The reason for this is extremely simple: the main Wehrmacht field artillery systems did not fire at such a range, and individual batteries and artillery divisions of high power were used to solve completely tinder tasks. The base airfields of the 9th Western Air Force SAD of the Western OVO (it was this division that lost the largest number of aircraft) were located near the cities of Bialystok and Zabluduv (80 km from the border), Belsk (40 km from the border) and Ross (170 km from the border). As for the bomber divisions of the Air Force of the Western OVO (12 BDTs and 13 BADs), they were based in the region of Vitebsk, Bobruisk, Bykhov, at a distance of 350–400 km from the border. At the advanced border airfields there were fighters, the weight of which (without

fuel, pilot and ammunition) was 1.5–2 tons (the weight of a Volga car with passengers). A dozen strong men, without straining at all, could roll such an aircraft to the edge of the airfield in 10 minutes and shower it with spruce branches. However, if on the morning of June 22, 1941, the planes still had to be rolled and masked somewhere, this only meant that it was time to hand over the commander of these strong men to the tribunal. Order of the People's Commissar of Defense of the USSR No. 0367 of December 27, 1940.

> ... It is necessary to realize that without careful camouflage of all airfields, the creation of false airfields and the camouflage of all materiel in modern warfare, the combat work of aviation is unthinkable. I
>
> order: ... 3.
>
> All airfields scheduled for sowing in 1941 must be sowed, taking into account camouflage and in relation to the surrounding area, by selecting appropriate herbs. Simulate at airfields: fields, meadows, vegetable gardens, pits,

ditches, ditches, roads, in order to completely merge the background of the airfield with the background of the surrounding area. The same

should be carried out by overseeding at all previously built airfields. By July 1, 1941, complete the camouflage of

all airfields located within a 500-km zone from the border ***(hereinafter, it is emphasized by me.*** - M.S.). To the commanders of aviation divisions: 4. Before April 1, 1941, draw up a scheme-plan

for each airfield for camouflage, both in terms of

sowing and for the placement of portable camouflage equipment.

5. By the forces of the units, before April 1, 1941, prepare the necessary light portable camouflage material for each airfield ...

Order of the People's Commissar of Defense of the USSR No. 0042 of June 19, 1941.

... I order 1. By

1.7.41, sow all airfields with grasses to match the color of the surrounding area, paint the runways and imitate the entire airfield situation in accordance with the surrounding background. 2. Airfield buildings up to and including the roofs shall be painted in the same style as

the buildings surrounding the airfield. Bury the gas storages in the ground and carefully disguise them. 3. Categorically forbid linear and crowded

dispersed camouflaged disposition of aircraft to ensure their complete And unobservability from the air ... 7. The camouflage of airfields, warehouses, combat and transport vehicles to check from the air by

observation of the responsible commanders of the headquarters of the districts and photography. Any deficiencies discovered by them should be eliminated immediately…

Order of the People's Commissar of Defense of the USSR No. 0043 of June 20, 1941.